MINISTRY OF NATURAL RESOURCES

Pembroke District

LAND USE GUIDELINES

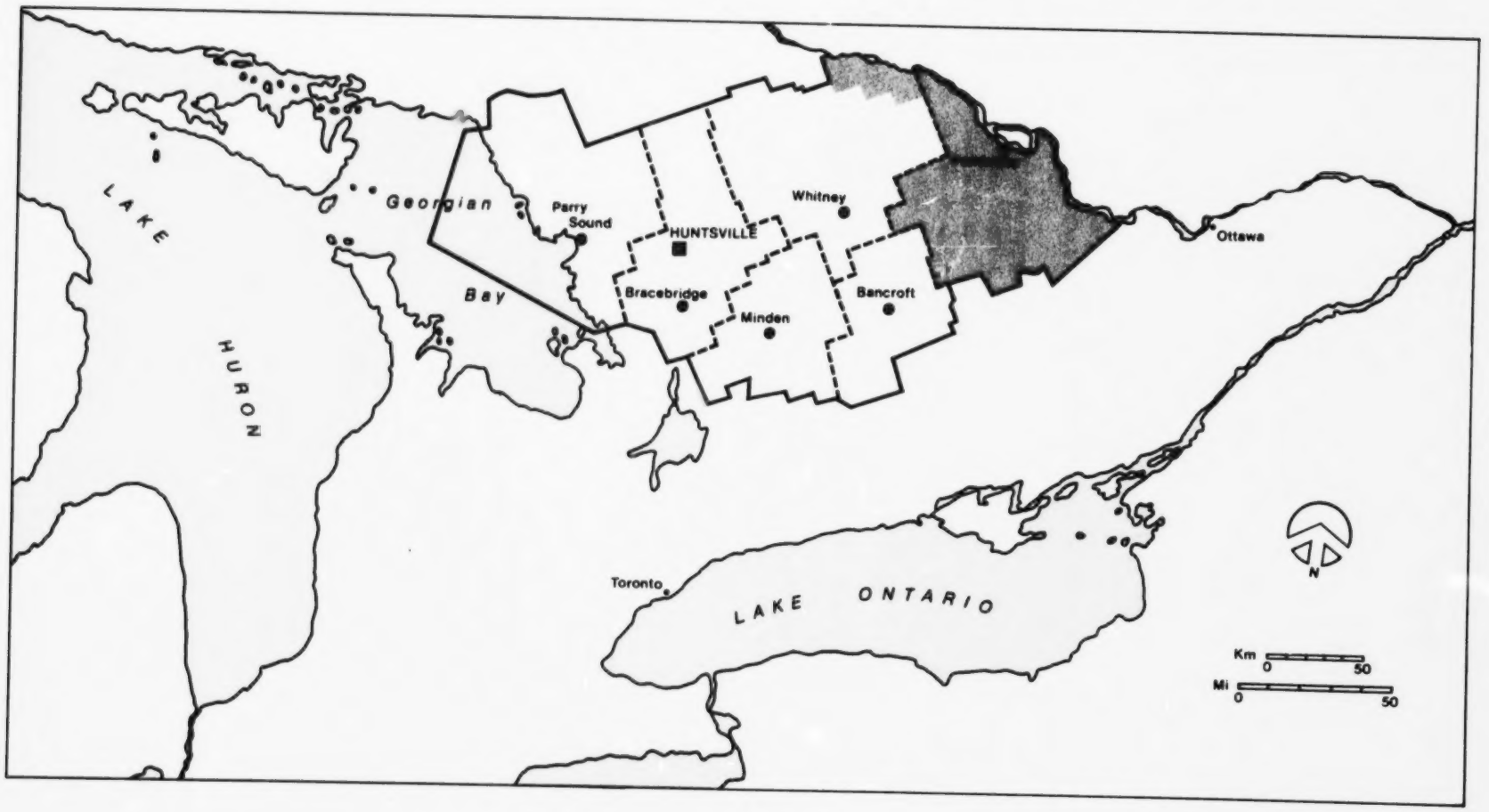
Ontario Ministry of Natural Resources

Hon. Alan W. Pope
Minister

W. T. Foster
Deputy Minister

1983

PEMBROKE DISTRICT
ALGONQUIN REGION



FOREWORD

The Ministry of Natural Resources has a primary responsibility for the management of the province's natural resources, in particular those related to resource development and outdoor recreation.

This document will serve as a design for integrated resource development in the Pembroke District. It is also intended to provide others with an understanding of the ministry's mandate and its programs, which rely on both Crown and private lands for success.

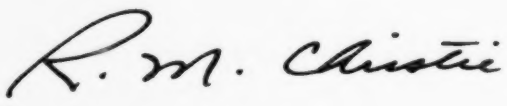
To ensure an integrated approach the *Pembroke District Land Use Guidelines* identify where and in what manner the ministry may use Crown land, and to what extent it may wish to support uses of private land, in working toward the achievement of ministry objectives.

For Crown land the ministry must consider the land and water requirements for both its own programs and those of other government agencies. This will require ongoing liaison with these other agencies. The ministry will continue to consult with private landowners and local municipalities since the latter have the responsibility for control of private land use.

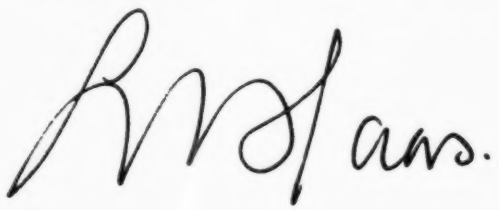
The program targets and approaches outlined in this document follow the overall direction outlined in the ministry's *Southern Ontario Co-ordinated Program Strategy.* The *Land Use Guidelines* may serve as one of the sources of information for ministry involvement in the planning process of municipalities and other agencies. It is recognized, however, that this document has no legal status.

Planning is a continuous process and must be responsive to changing needs, information and technology. Thus the targets and strategies presented in this document are subject to revision based on such factors as changes in government policy, new or refined resource information, and significant changes to land use in other planning documents. To accommodate changes, the *Land Use Guidelines* will normally be reviewed every ten years and will involve full public consultation.

Comments may be addressed to the District Manager at any time.



Regional Director
Algonquin Region



District Manager
Pembroke District

contents

FOREWORD	v
I INTRODUCTION	1
II GENERAL POLICIES	5
A: integrated resource management	5
B: public safety	6
C: environment	7
D: energy	8
III SPECIFIC POLICIES	9
A: forestry	9
B: mineral aggregate	12
C: minerals and fossil fuels	15
D: fisheries	17
E: wildlife	21
F: provincial parks	26
G: general recreation	30
H: land administration	32
I: water and fire management	35
IV STRATEGIES FOR INTEGRATED RESOURCE MANAGEMENT	39
A: significant program areas	39
B: areas of special interest	40
C: modified management areas	40
D: resource access	42
E: general resource areas	44
V APPLICATION	49
APPENDIX	53
A: highlights of the ministry's public consultation program	54
GLOSSARY	57

figures

	Regional Setting	iii
1	Forestry	11
2	Mineral Aggregate	13
3	Minerals and Fossil Fuels	16
4	Fisheries	18
5	Significant Wildlife Habitat	23
6	Provincial Parks and Recreation	28
7	Land Tenure	33
8	Fire Risk Zones	36
9	General Resource Areas	back pocket

tables

1	Achievement of Provincial Park Targets in Pembroke District	29
A1	Summary of Contacts	55
A2	Summary of Responses	56

I INTRODUCTION

The Ministry of Natural Resources is responsible for the management of forest, mineral, fish, wildlife, land and water resources; for the protection of special or representative plants, animals and sites; and for providing or encouraging the provision of a wide range of outdoor recreation activities.

Resources are managed to meet Ontario's present and future needs. This is not a simple task. The same resources often are needed for many different purposes. The ministry must recognize future needs and actively pursue a course of action to meet those needs.

The activities of the ministry are directed by a goal and three broad objectives.

The goal of the Ministry of Natural Resources is:

- to provide opportunities for outdoor recreation and resource development for the continuous social and economic benefit of the people of Ontario and to administer, protect, and conserve public lands and waters.

The objectives of the ministry are:

Resource Production

- to provide for an optimum continuous contribution to the economy of Ontario by stimulating and regulating the utilization of available supplies of fish, furbearers, minerals, and trees by resource products industries.

Outdoor Recreation

- to provide from public lands and waters and to encourage on other lands and waters:
  - a wide variety of outdoor recreational opportunities accessible to, and for the continuous benefit of, the people of Ontario;
  - the identification and conservation of unique or representative physical, biological, cultural, and historical features of the province; and
  - a continuous contribution to the economy of Ontario from tourism and its related industries.

Land and Water Management

- to facilitate the orderly development and conservation of Ontario's land and water resources, for the continuous social and economic benefit of the people of Ontario; and
- to prevent loss of life, and to minimize social disruption, property damage and loss of natural resource values resulting from forest fires, floods, erosion, earth slippage, and abandoned mines.

These broad objectives are implemented through programs carried out at the district level. Pembroke District is one of forty-seven administrative districts within the province. To be consistent with the municipal organization of Renfrew County, the Township of Head, Clara and Maria, which is part of the ministry's Algonquin Park Administrative District, is included in these *Land Use Guidelines*.

The district planning area covers a total of 7,811 square kilometres (3,014 square miles), 40 percent of which is Crown land. The topography ranges from smooth to rolling valley areas in the east where agricultural activities predominate and population is concentrated, to moderately and strongly broken forested uplands in the west. A wide variety of forested land provides the base for the wood industry of the planning area and habitat for wildlife.

Most of the Pembroke District planning area drains easterly by rivers flowing to the Ottawa River, the largest being the Madawaska and Bonnechere Rivers. These rivers, together with the many lakes and wetlands, provide a wide variety of outdoor recreation opportunities.

To determine how best to manage natural resources to meet its overall goal and objectives, the ministry has undertaken a planning process that includes: the identification of specific program objectives and targets; the collection and analysis of appropriate background information; the identification and evaluation of optional strategies; the preparation of a draft document; and finally the preparation and approval of final *Land Use Guidelines*.

Initially the ministry prepared a policy statement for southern Ontario referred to as the *Co-ordinated Program Strategy*. This statement identified the overall ministry objectives, targets and general direction within which *Land Use Guidelines* in southern Ontario were prepared for each district.

Two elements of the planning process require particular attention the use of targets and the ministry's public consultation process.

The ministry has established general objectives for each of its programs. These have been quantified and stated in terms of a target and also expressed in terms of a time frame for attainment.

Targets identify what results are expected within a planning period to contribute toward achievement of the overall objectives. Targets also enable the ministry to assess the degree to which program objectives are being met.

Targets will not be met immediately, rather, the intent is to aim for target achievement over the planning period.[1] It is recognized however, that a number of factors may affect target achievement including:

- validity of the original assumptions on which the target was based;
- legislative approval of necessary funding and staffing required to carry out the level of resource management on which target achievement is based;
- changing economic and social conditions on a local or provincial basis;
- new or improved inventory and information which could result in a change of the original estimates; or
- a more thorough analysis of original information.

Where there are changes in targets, whether for the above or other reasons, the *Land Use Guidelines* will be amended accordingly. The *Pembroke District Land Use Guidelines* are best viewed as a working paper which will be subject to considerable review and re-evaluation as the ministry proceeds with application.

Public involvement in the ministry's southern Ontario planning program began with the development of the *Southern Ontario Co-ordinated Program Strategy*. Government agencies, counties, and interested groups and individuals were consulted in the preparation of this statement.

Public consultation in the preparation of the *Pembroke District Land Use Guidelines* began with the holding of open houses in June and August of 1980. At that time the public was asked to comment on the accuracy of the ministry's information and to provide any additional knowledge they had of the planning area and raise any problems or issues they felt should be addressed during the process.

In July, 1982, a draft *Pembroke District Land Use Strategy* was released and in August, additional open houses were held to explain the direction proposed and to invite public comment. In addition to receiving many verbal and written comments as a result of the open houses, the ministry held meetings with municipalities and interest groups at their request.

Based on the analysis and evaluation of all the public input received, this document was prepared.

Copies of all comments received are available for viewing in the Pembroke District office, the ministry's main office public reading room and the Legislative Library at Queen's Park. Details of the public consultation program are found in Appendix A of this report.

The *Land Use Guidelines* identify how the ministry may use and manage Crown land, and how it may wish to suggest the use and management of private land.

Generally, the direction which has been established by the ministry in Pembroke District recognizes a moderate rate of economic growth related to resource industries, while maintaining or improving the quality of resource, recreational, and tourism opportunities provided in the district. It recognizes that economic growth is, in large measure, contingent upon the efficient management and development of the natural resources found in Renfrew County.

To succeed in meeting ministry objectives, a significantly increased management effort is required on Crown land in Pembroke District. The contribution from private land must also be substantially increased. Private landowners, other government agencies, municipalities, conservation authorities and interest groups are key partners in any effort to achieve effective and coordinated resource management. The ministry will continue

(1) The planning period for all programs is 1980 to 2000, except for forestry in which the planning period extends from 1980 to 2020.

MAR 3

to work with private landowners through assistance programs and with these other agencies, to ensure that resource values are considered in local planning documents.

On private land, the authority of the municipality related to land use control and the rights of the private landowner are clearly recognized by the ministry and are reflected in this document.

The *Land Use Guidelines* have no legal status. The planning control of private land in municipalities is exercised by those municipalities and the Minister of Municipal Affairs and Housing under the authority of the *Planning Act*.

There will be instances when the ministry and others (for example, another government agency) will have different intentions for the same area. When such situations are identified, the ministry will enter into negotiations to arrive at an acceptable solution.

The way in which the ministry hopes to work with municipalities, conservation authorities, and others (for example, the Ministries of the Environment, and Agriculture and Food) is outlined in the final section of this report.

Four general policies have been established by the ministry to provide direction for: integrated resource management, public safety, the environment, and energy. It is intended that these policies, with their associated directive, apply equally to all ministry activities.

A: integrated resource management

1. OBJECTIVE

Programs will be integrated to ensure the efficient use of land and water to achieve ministry objectives.

2. DISCUSSION

Through the preparation of ministry *Land Use Guidelines*, it has become apparent that a large degree of integration must occur if ministry objectives are to be achieved. Integration must occur both in the use of a finite resource base, and in the delivery of programs.

3. PROGRAM STRATEGY

- apply the concept of multiple use to land and water management as follows:
  - normally require or encourage two or more compatible activities on the same major area concurrently or sequentially over time; and
  - recognize that, in some circumstances, management of areas for a single purpose such as extraction, protection, or recreation is necessary;
- ensure that each program contributes, to the extent possible, to the achievement of all ministry objectives. Individual area management plans, including water management plans, will be directed toward achieving as many ministry objectives as possible to ensure integrated management and increased efficiency; and
- permit interim use of candidate parks providing park values are protected. Uses and facilities which complement the achievement of park objectives will be encouraged; uses which have no significant negative impact on the long-term achievement of park objectives will be permitted with judicious controls; and uses which would conflict with the long-term achievement of park objectives will be prohibited.

B: public safety

1. OBJECTIVE

The ministry will seek to eliminate loss of life and to minimize property damage and community disruption resulting from floods, erosion, earth slippage and forest fires.

The ministry will seek to eliminate injury and loss of life from hazards around abandoned pits, quarries and mine shafts, and from abandoned oil and gas wells.

The ministry will promote the safe pursuit of outdoor recreation and resource production activities.

2. DISCUSSION

In Pembroke District the first objective is met by the ministry in cooperation with municipalities through flood contingency and emergency response planning, forest protection, and the implementation of ministry hazard land policy through input to municipal plans and by-laws.

The Ministry of Natural Resources is responsible for forest fire management in Ontario. This responsibility is shared with municipalities, landowners, and resource users.

Fire has always been a significant factor in the forests of Ontario and will continue to have an impact on people and their environment. Forest fire management is an integral part of land and resource management.

Flood protection is sought by restricting flood susceptible land uses from flood plains. The regulatory flood for designation of flood plains in Pembroke District is defined as that produced by a storm equivalent to the regional storm or the 1:100 year flood.[1] Generally, lands east of Pembroke are affected by the 1:100 year flood only. Lands west of the City of Pembroke are affected by the 1:100 year flood or the regional storm.

The second objective is met in conjunction with the Ministry of Labour through field inspection of abandoned pits, quarries, and mines and through follow-up action.

The third objective is met in conjunction with other agencies and in cooperation with special interest groups, such as the Ontario Federation of Anglers and Hunters.

3. PROGRAM STRATEGY

In conjunction with others:

- ensure that new development avoids areas prone to flooding, erosion, and earth slippage or occurs only with adequate protection and safeguards;
- advocate contingency planning, undertake flood forecasting and cooperate in the provision of remedial works such as dams and channelization where development has traditionally existed on hazard lands;
- promote and participate in flood plain mapping;
- suppress forest fires in the district based on the following priorities: human safety; public works; private and public property; and natural resources;
- act as the lead agency in a planned program for response to forest fire and flood emergencies;
- promote the hunter safety training and the trapper education programs;
- encourage the provision of adequate safety measures at operating pits, quarries, mines and in forest operations; and
- ensure adequate safety measures are provided and maintained at abandoned pits, quarries and mines.

(1) The regional storm is based on a storm which occurred in Timmins in 1961. In the Timmins storm of 1961, 19.3 centimetres (4 inches) of rain fell over a watershed of 10.4 square kilometres (4.01 square miles) in a period of 12 hours. The 1:100 year flood is a periodic flood of a magnitude having a recurrence interval of once in every 100 years.

C: environment

1. OBJECTIVE

The ministry will conduct its activities in an environmentally responsible manner.

2. DISCUSSION

The ministry is one of several agencies which have a legislated responsibility to maintain an acceptable environmental quality for the people of Ontario.

Achievement of ministry program objectives is contingent upon maintaining a satisfactory environment through responsible management. Of particular concern is the potential effect of acid rain. This concern is greatest on the Precambrian Shield where lakes and soils have limited capacity to buffer the effect of acid rain. The ministry will work closely with other government agencies to monitor the effect of contaminants such as acid rain on the achievement of ministry objectives.

All programs of the ministry share in the responsible management of natural resources. Biologically sound management is a basic precept of forest, wildlife and fisheries management. The management of mineral aggregates includes both protecting them from incompatible activities and discouraging use of high quality materials where lower quality materials would be suitable. Where environmental impacts are inevitable, mitigating measures and rehabilitation are used.

The ministry is also concerned with wetland management. As a result of this concern the ministry will be issuing a wetland policy in the near future.

A number of the ministry's activities are subject to the *Environmental Assessment Act* and require compliance with the conditions and procedures established for class environmental assessments, individual assessments or specific exemptions.

3. PROGRAM STRATEGY

- manage renewable resources to provide sustained benefits. To the extent appropriate, this will involve management of entire plant and animal communities rather than single species or products;
- manage non-renewable resources to meet current demands, giving attention to anticipated future needs. This will include discouraging the use of high quality materials where low quality materials would suffice;
- encourage consideration of all wetland values in municipal planning and the planning of other agencies;
- identify and seek to protect the habitat of provincially rare and endangered animals and plants;
- consider critical resource areas in planning and management; and
- cooperate with other agencies in monitoring the effects of contaminants, including acid rain, on natural resources and in research to seek solutions.

D: energy

1. OBJECTIVE

The ministry will undertake its activities so as to contribute to provincial energy objectives.[1]

2. PROGRAM STRATEGY

- ensure that energy potential is considered before a permanent commitment is made to uses which exclude energy production;[2]
- conduct an inventory of potential hydraulic energy from ministry dams;
- provide opportunities, including access, for harvest of wood and use of wood residues, both directly and indirectly, as fuel; and
- participate in inventory programs to determine the size and quality of peat resources.

(1) Provincial energy objectives are identified in ***"Energy Security for the Eighties: A Policy for Ontario," 1979, Ministry of Energy.***

(2) There are no sites with high potential for hydraulic power in the district. However, Ontario Hydro has identified low priority hydraulic sites at Highland Falls on the Madawaska River and at Paquette Rapids on the Ottawa River.

This section outlines the district's strategies for each program, and the basis upon which they were developed. It identifies activities necessary to meet program targets, to minimize impacts on other uses, and to assist in the implementation of other programs. Finally, it relates these strategies to the program's land using components, which are illustrated as general resource areas on Map 9 (back pocket).

A: forestry

1. OBJECTIVE

The objective for forest management in southern Ontario is to provide for an optimum contribution to the economy by forest-based industries consistent with sound environmental practices, and to provide for other uses of the forest.

2. TARGETS

The forestry targets[1] in Pembroke District are:

- to produce an annual continuous supply of 0.75 million cubic metres (25.2 million cubic feet)[2] of wood for industrial purposes by the year 2020 while maintaining the present diversity of forest products; and
- to make the maximum contribution from forest production to the achievement of the provincial energy target.

3. DISCUSSION

The present harvest of wood in Pembroke District is 0.243 million cubic metres (8.1 million cubic feet) annually composed primarily of conifer species such as white pine, red pine and jack pine, and intolerant hardwoods such as poplar and white birch. Approximately 52 percent of the present harvest comes from private land while the remaining 48 percent comes from Crown land.

It has been determined that the 459,000 hectares (1,147,500 acres) of productive forest in the district could produce 0.84 million cubic metres (29 million cubic feet) of fibre with increased management effort. This would include 0.34 million cubic metres (12.0 million cubic feet) of intolerant hardwoods, 0.34 million cubic metres (12.0 million cubic feet) of conifer species and 0.16 million

(1) For the purpose of planning, the Township of Head, Clara and Maria in Algonquin Park District has been included as part of Pembroke. The specific target for the Township of Head, Clara and Maria is 0.07 million cubic metres (2.6 million cubic feet) annually of timber from public land.
(2) The target and all calculations of forest productivity are expressed in terms of net merchantable volumes, unless otherwise stated.

cubic metres (5.6 million cubic feet) of tolerant hardwoods such as maple and oak.

The target for wood production does not rely on the total productive forest. The annual target of 0.75 million cubic metres (25.2 million cubic feet) could be met based on the utilization of 85 percent of the present productive forest in the district. Based on the analysis of the resource base, it is anticipated that of the total target, 0.39 million cubic metres (13.7 million cubic feet) could come from Crown land while private lands could contribute 0.33 million cubic metres (11.6 million cubic feet) of wood.

The target, therefore, permits a 3.0 percent per annum growth rate to the year 2020 in the present harvest of wood in Pembroke District. However, due to the presence of a high percentage of material of current pulpwood size and quality on Crown and private land, achievement of the target is contingent upon encouraging the establishment of forest-based industries which will utilize small sawlog and non-sawlog material.

Achievement of the target is also contingent on the availability of wood volumes on private land. The target cannot be achieved from Crown land alone. In fact, even with very intensive management, Crown land can provide no more than 60 percent of the target. Therefore, achievement of the target requires that virtually all of the productive forest land in Pembroke District not committed to other uses be available for timber harvest.

In addition to the production available for industrial purposes, a substantial, but as yet undetermined volume of wood from tree tops and cull trees is available for fuel to contribute to the achievement of the provincial energy target.

Map 1 generally illustrates areas important for timber management.

Increasing the production of quality wood products to the target level requires extensive forest renewal and improvement on both Crown and private land. The task is complicated by the present condition of the forest; the time required to effect improvement; the large number of individual private landowners; the small size of holdings; the lack of incentives; and often, the presence of disincentives (the long-term investment horizon, aesthetic impacts of cutting) to private land forestry. Achievement of the target will therefore require much more intensive forest management on both Crown and private land.

The general forest management strategy within the district is based on two elements. Firstly, through the preparation of forest management and operating plans, the full utilization of the allowable cut from Crown lands will be promoted and forest production on Crown lands and agreement forests will be maintained and selectively increased. Industry will be encouraged to use small diameter and lower quality material as well as undesirable species. Secondly, where feasible, the forest management program will be implemented on the highest capability sites (site classes 1 and 2) of the available productive forest land. Crown land forest management will be of highest priority for implementation of the forest management program followed by agreement forests and private lands.

4. PROGRAM STRATEGY

a. General

- undertake forest management on Crown lands in accordance with accepted silvicultural practices and encourage the management of private land forests in a similar fashion;
- attempt to maintain and selectively increase the area of private forest land and maintain or increase production from existing woodlots;
- consolidate Crown land holdings important for timber production;
- apply the concept of multiple use management and where consistent with silvicultural practices, provide for other uses of the forest;
- undertake forest management, harvesting, regeneration and stand improvement operations within candidate parks subject to management guidelines that protect parks and recreation values (see page 26);
- continue to use prescribed burning as a forest management tool in accordance with ministry policy and procedures; and
- protect and manage established seed production areas, seed orchard research and intensive forest management areas.

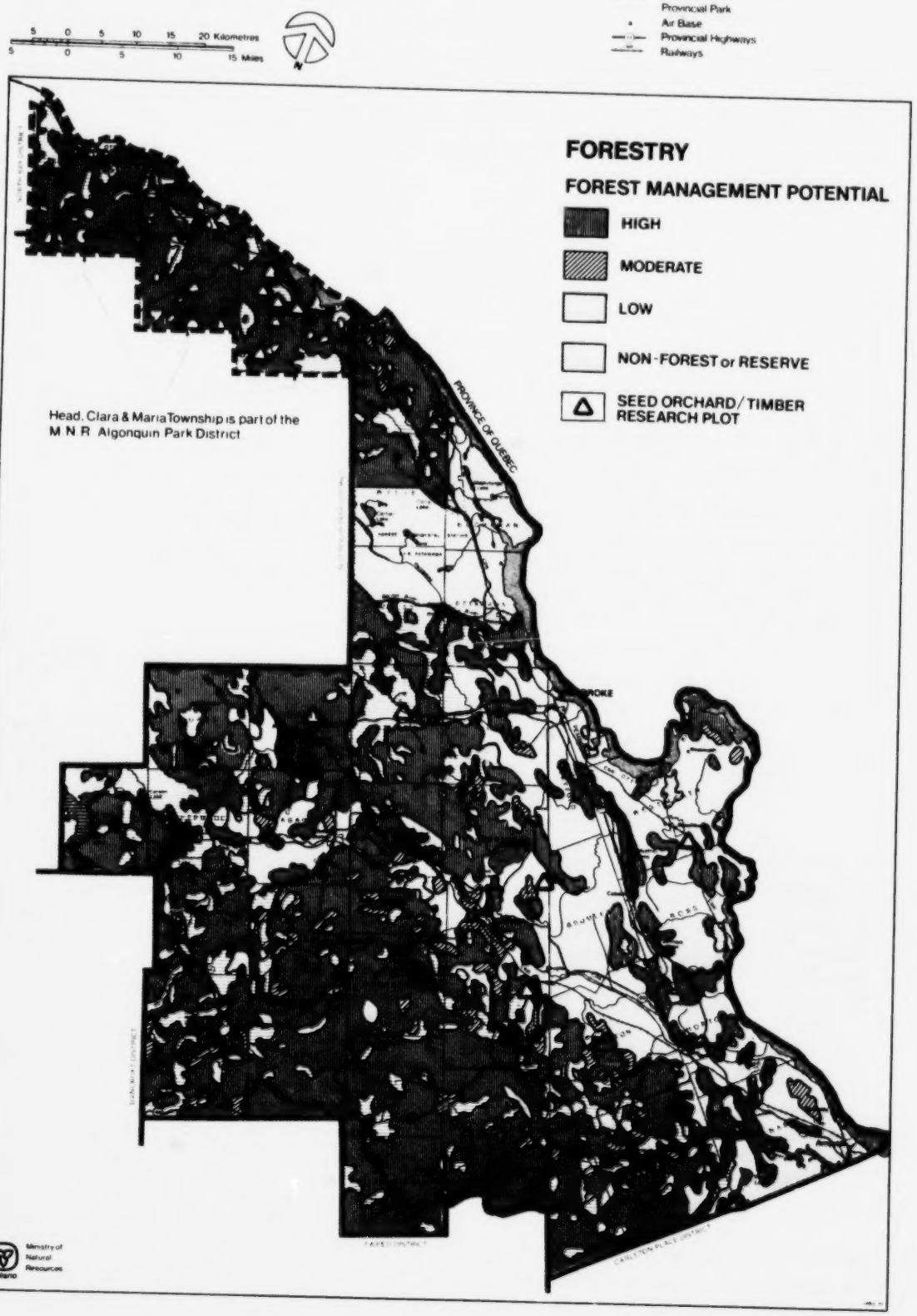
b. Program Implementation

To ensure proper management of timber resources including the maintenance of species composition, production of quality material and greater fibre utilization on Crown lands, and in Renfrew County forests:

- produce forest management plans and circulate these plans to all programs for review and approval;
- consolidate land holdings by: acquiring lands required for access or consolidation of Crown land or Renfrew County Forest Lands;

MAP 1

PEMBROKE DISTRICT



encourage disposal of inaccessible or marginally productive sites of the County Forest; and exchange Crown lands for more productive sites, where possible; and

- undertake forest management, harvesting, regeneration, stand improvement and site preparation operations in accordance with approved forest management plans and in conjunction with provincial policy and procedures.

To encourage the proper management of the timber resources on private lands:

- produce private land forest management strategy documents detailing the level and emphasis of management, public education and municipal involvement;
- give priority to increased efforts in the extension program and encourage municipal governments and private landowners to manage the timber resource through agreement forests, *Woodlands Improvement Act* agreements, and advisory services; and
- provide input to and review of municipal official plans, plans of other agencies, and plans of the private sector to designate high capability forest lands for timber production; discourage strip residential development in productive forest sites; encourage retention of large holdings; and ensure adequate access to the resource.

To accommodate other uses of the forests and to ensure multiple use of the forest land base:

- ensure all programs are notified of the initiation of management and operating planning to enable input and, upon completion, circulate all such plans for review and comment;
- accommodate the needs of other government agencies, utilities and municipalities for forested lands where such need can be demonstrated to the satisfaction of the ministry;
- apply special management prescriptions in areas identified as being important for the achievement of other program objectives;
- ensure the participation of all programs in the preparation of management guidelines for candidate provincial parks which identify the resources requiring protection and management; and
- provide the opportunity for fish and wildlife program involvement in the private land forestry program wherever feasible.

B: mineral aggregate

1. OBJECTIVE

The objective for mineral aggregate production in southern Ontario is to meet anticipated future demand with minimal disturbance to natural and cultural resources and the social environment.

2. TARGETS

The target for mineral aggregate production in Pembroke District[1] is to ensure a total cumulative supply of 29.3 million tonnes (32.3 million tons) for the period 1982 to 2000.

3. DISCUSSION

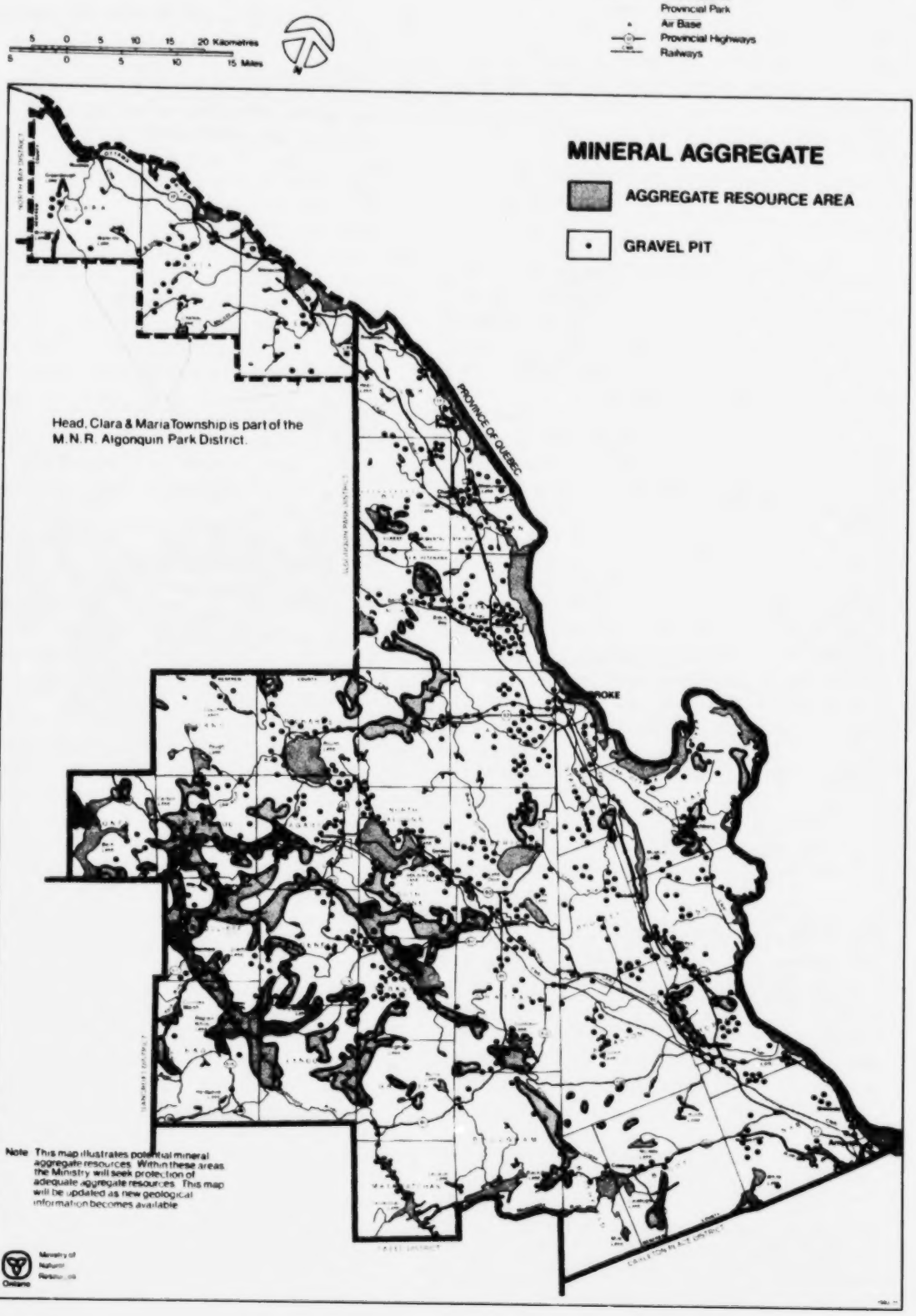
Total production to date in Pembroke District is estimated at 35 million tonnes (38.6 million tons) of sand and gravel of which 20.8 million tonnes (22.9 million tons) has come from private land.

The total area of land in the district potentially underlain by mineral aggregate is 208,000 hectares (520,000 acres). (See Map 2.) Achievement of the target requires the use of about 1,200 hectares (3,000 acres), based on historical production rates. Due to the very large potential supply, there does

(1) The target for the Township of Head, Clara and Maria, which is included in Pembroke District for planning purposes, is 0.8 million tonnes (.9 million tons).

MAP 2

PEMBROKE DISTRICT


MNR Administrative District
Area included for District Planning
Province
County
City, Town, Village, Township
Community
Indian Reserve
Provincial Park
Air Base
Provincial Highways
Railways
5 0 5 10 15 20 Kilometres
5 0 5 10 15 Miles
MINERAL AGGREGATE
AGGREGATE RESOURCE AREA
GRAVEL PIT
Head, Clara & Maria Township is part of the M.N.R. Algonquin Park District.
PROVINCE OF QUEBEC
Note This map illustrates potential mineral aggregate resources. Within these areas the Ministry will seek protection of adequate aggregate resources. This map will be updated as new geological information becomes available.
Ontario

not appear to be any significant conflict with other resource requirements. Where aggregate resources are extracted, proper rehabilitation can ensure that such sites are returned to productive uses, consistent with the interests of the community.

The target provides for a 1 percent annual rate of growth in the use of aggregate to the year 2000. The assumption in this is that present aggregate production meets current demands. As aggregate production is primarily devoted to road and building construction, and since this sector is not expected to experience significant growth in the foreseeable future, recent trends provide a realistic basis for the projections.

Care must be taken in using the supply information as it is based upon a very preliminary inventory. The inventory may have accurately identified the location of aggregate, yet little is known of the quality and quantity of individual deposits except that a substantial portion of the 208,000 hectares (520,000 acres) of aggregate consists of sand plains containing material suitable for fill only. Only a small portion of the area is underlain by higher quality aggregate and will be required for aggregate production.

There are several additional difficulties with attempting to ensure that adequate resources are available for the future. Future supplies are not ensured as the ministry cannot guarantee continued use of existing privately operated pits, and with new deposits, there are many geological, economic, social and environmental constraints that may affect the total use of any resource.

Another difficulty relates to the distribution of the resource. Aggregate is extremely plentiful in some areas, while in short supply in others. As transportation of aggregate is very expensive, this uneven distribution can cause local difficulties.

Finally, it must be recognized that mineral aggregate is a non-renewable resource. The target provides for anticipated demand only to the year 2000. It does not account for demand after that date, nor does it allow for unexpected increases in demand prior to that date. It thus, represents the minimum supply of aggregate for which the potential must be maintained to meet needs for the next twenty years.

The general approach for mineral aggregate is to seek protection of existing areas of production from other uses which may preclude the future extraction of aggregate; to continue to refine the inventory; and to ensure that the value of undeveloped aggregate resources is considered before the land is committed to other uses.

4. PROGRAM STRATEGY

a. General

- seek to protect pits as identified in this document from uses which preclude expansion of the pit areas and utilization of the resource;
- maintain the potential of accessible aggregate resources in preference to more distant deposits;
- ensure that local needs for aggregate are considered before known aggregate resource areas are committed to other uses which may preclude extraction of the resource;
- ensure the progressive rehabilitation of pits and quarries consistent with the expected sequential use of the lands;
- ensure that extractive operations on Crown land have a minimum impact on adjacent land uses and other ministry programs; and
- determine the quality and quantity of sand, gravel, and stone resources and attempt to refine estimates of aggregate demand.

b. Program Implementation

To maintain the potential of existing pits and aggregate resource areas and to ensure that extractive operations have a minimum impact on adjacent land uses:

- encourage municipalities to maintain the potential of the areas identified in this document on private lands by designating such areas for land uses such as forestry and agriculture which do not preclude the option of future aggregate extraction;
- restrict the establishment of incompatible uses on identified aggregate resource areas on Crown land;
- restrict the extraction of aggregate from existing Crown pits where it is demonstrated to have negative impact upon other program interests, but only after consideration of the impact of the loss of aggregate supply; and
- review all private sector development proposals or municipal plans that affect the potential extraction of aggregate and carefully consider the implications of loss of supply of aggregate material.

To ensure that pits and aggregate quarries are adequately rehabilitated:

- require the preparation of an operating plan for pits or quarries (where quarry permits are required) on Crown land, detailing rehabilitation of the site; and
- encourage municipalities to require that adequate site rehabilitation occurs on private lands.

C: minerals and fossil fuels

1. OBJECTIVE

The objective for minerals and fossil fuels in southern Ontario is to provide for a strengthening of the contribution of these resources to provincial economic development and energy production.

2. TARGETS

The target for mineral resources in Pembroke District is to keep open as much Crown land and unalienated mining rights as possible for mineral exploration and development.

Specific mineral and fossil fuel production targets cannot be established because of the difficulties in predicting market trends and assessing resource potential, and because actual production is primarily a responsibility of the private sector.

3. DISCUSSION

Mining activities in the Pembroke District are limited but significant. There are two active operations, one producing a base metal and the other clay products. Map 3 illustrates the mineral resources in the district.

Pembroke has been an area of active mineral exploration in the past. In recent years, there has been an increase in interest in the area which may be maintained as demands for many minerals are expected to increase. Changing commodity values, technology, and the demand for energy sources may alter the relative importance of various minerals and therefore, the potential of areas to support mining development. Peat is one such mineral that has recently received attention and for which there may be the potential for development within the planning area.

One difficulty related to mineral exploration in the district is that as much of the land is privately owned, exploration may be restricted. A second major difficulty is the lack of adequate geological mapping and information to permit the definitive identification of areas likely to be suitable for exploration and development.

As a general approach, the ministry will maintain as much land as possible available for mineral exploration, while not compromising other program interests. In addition, it will continue to delineate favourable geological areas and expand the geoscience data base.

4. PROGRAM STRATEGY

a. General

- encourage industry to bring new deposits into production as soon as possible;
- encourage and assist industry in locating mineral deposits; and
- ensure that the impacts of exploration activities on other resources are minimized.

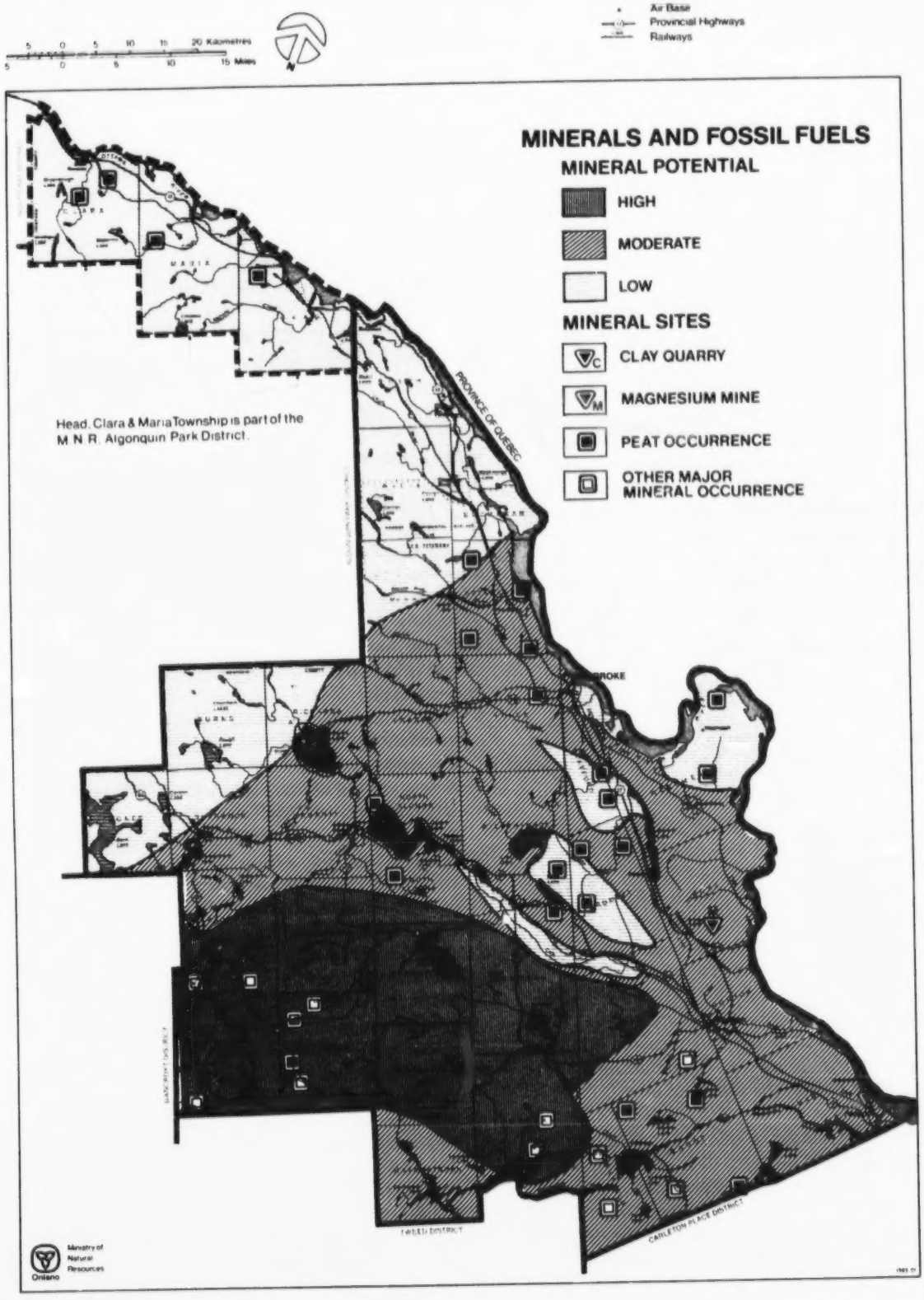
b. Program Implementation

To provide as much land area as possible for mineral exploration:

- ensure mineral values are evaluated before a permanent commitment of significant areas of Crown land to non-mining uses occurs. In areas where significant non-mineral values exist, the ministry will, where possible, permit exploration under controlled conditions before a permanent disposition is made;
- review all Crown lands which have been withdrawn from staking, and permit mineral exploration wherever appropriate;
- consider permitting mineral exploration and extraction in candidate provincial parks under controlled conditions in accordance with the interim use policy outlined from integrated resource management (page 5);
- where appropriate, allow exploration on acquired lands by means of staking, licence, land use permit or other suitable means;
- encourage municipalities and other government agencies to support mineral exploration and extraction; and
- review municipal official plans to ensure that undue restrictions are not placed on mineral exploration activities.

MAP 3

PEMBROKE DISTRICT



To assist industry in locating suitable deposits:

- delineate favourable geological areas and expand the geoscience data base through the collection, storage and dissemination of information.

To ensure that mineral exploration activities have a minimal impact on other resources:

- develop comprehensive guidelines for exploration for voluntary use by the mining industry;
- encourage exploration for minerals subject to conditions which will minimize potential environmental damage;
- give high priority to the evaluation of minerals in specific areas identified to be important for other program interests; and
- reserve the mineral rights on Crown land where mineral exploration will adversely affect other district program interests.

To encourage the proper use and management of peat resources:

- continue to inventory potential peat resources;
- provide input to and review of municipal, private sector, and other agency plans to ensure consideration is given to the resource value of peat on private land;
- review proposed peat developments to ensure that environmental impacts on Crown land are examined and district program interests are protected. On private lands, protection will be sought through the municipal planning process and applicable legislation. On Crown lands, control will be exercised through the provisions of the *Mining Act* and the *Public Lands Act* and other applicable legislation; and
- encourage and control the exploration and development of peat deposits through means such as the issuance of work or quarry permits, licences of occupation, or mining leases.

D: fisheries

1. OBJECTIVES

The objective for fisheries management in southern Ontario is to provide opportunities for recreation and economic benefits consistent with the maintenance of healthy fish communities.

More specific objectives are:

Sport Fishing

- to meet the demand within the limits of a widely managed and rehabilitated resource;

Commercial Fishing

- to maintain a viable industry;

Bait Fishing

- to maintain current production; and

Provincially Rare and Endangered Species

- to prevent the extinction of any native fish species.

2. TARGETS

The targets for fisheries in Pembroke District are:

Sport Fishing

- to provide 1.31 million recreation opportunities by the year 2000;[1]

Commercial Fishing

- there is no assigned target for Pembroke District.

Bait Fishing

- to provide, at a minimum, the present level of harvest of 111,000 dozen; and

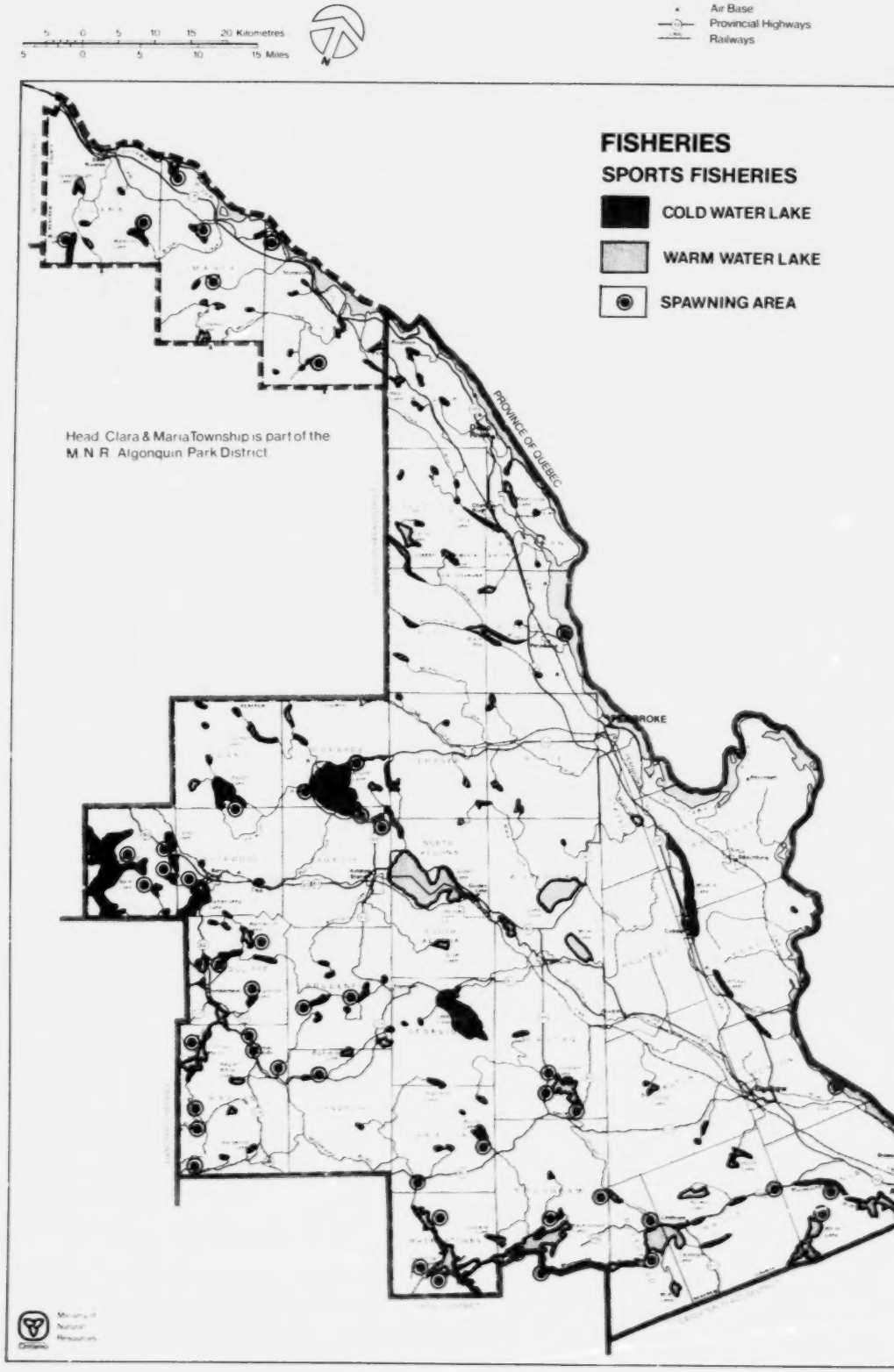
Provincially Rare and Endangered Species

- to ensure no native fish species become extinct.

(1) This includes the annual target for the Township of Head, Clara and Maria of 55,000 recreation opportunities.

MAP 4

PEMBROKE DISTRICT



3. DISCUSSION

The target for sport fishing is based on a harvest of 0.28 million kilograms (0.62 million pounds) of fish comprised of 32 percent of cold water fish and 68 percent warm water fish. This is equal to the total sustainable yield of the fishery in the district. In terms of recreation opportunities, it provides for a moderate (20 percent) increase in fishing between now and the year 2000. This increase is consistent with the anticipated increase in the population of Ontario.

The estimates of production are based on the assumption that potential production from fresh water is related to the amount of total dissolved solids (TDS) in the water, average depth of the water, and the surface area of a waterbody. These estimates are tentative and will be refined as new information becomes available.

Present production is thought to be considerably less than the potential due to incomplete natural stocking, over-harvest, undesirable species composition, and degraded habitat. In fact, present annual production of cold water fish may be as low as 28,500 kilograms (63,000 pounds).

Sports fisheries are shown on Map 4.

There are significant problems associated with achieving the targets in Pembroke. First, careful control of harvest within the limits of the resource is difficult under present management and legislative measures. Second, contaminants, notably acid rain and associated metal concentrations, may affect the restoration of fisheries or the continued maintenance of existing populations in the middle Madawaska watershed. Third, fisheries habitat may be degraded by the impacts of shoreline development, through the alteration of the portion of the littoral zone affecting spawning, nursing and feeding areas or through increased nutrient loading resulting in decreased oxygen concentration in the bottom waters of some cold water lakes.

Furthermore, as hatchery-raised fish are expensive to produce, sufficient stocks are not always available to permit either the re-establishment of top predator species (trout, bass, pickerel) in degraded communities or for the introduction of such species to waters that have never had populations of sport fish.

Finally, the maintenance of water levels and flows that are compatible with maximum fish production is very difficult. Maintenance of water levels for fish production often conflict with control of water for navigation, hydro-electric generation, and flood control.

The solutions to these problems are very complex and require significant management efforts to overcome. To meet future targets, it is essential that these problems be successfully dealt with. It should be clearly recognized that establishment of optimal conditions for fish production will take long-term intensive management efforts.

Ultimately, the angler demand across southern Ontario for lake trout and other cold water fish could exceed the capacity to produce. That situation currently exists in some areas. To mitigate this situation, cold water fisheries resources have to be protected and, where necessary, rehabilitated.

Accordingly, the general strategy adopted within the Pembroke District is to restore or rehabilitate existing fisheries which have suffered from over-harvest, or habitat and species composition degradation. This will be done, in part, by introducing desirable sports species in those waters best suited to that species, by improving the species composition of fish communities, by attempting to reduce water level fluctuations that have impacts upon fish communities, and by rehabilitating degraded fish habitats.

The successful implementation of this strategy should result in a significant increase in the production of desirable fish and healthier fish communities, especially cold water species, and thus an increase in the quality of recreational and tourism benefits.

4. PROGRAM STRATEGY

a. General

- maintain or improve fisheries habitat consistent with fishing requirements;
- establish fish population consistent with habitat capability;
- attempt to ensure that fish harvest is consistent with, and not greater than, the allowable harvest for each waterbody;
- promote the management and development of fisheries in privately controlled waters;
- maintain all existing access to waterbodies; and
- restrict the construction of dams on waters used for migration of fish, or provide means for fish migration.

b. Program Implementation

To manage and protect fisheries habitat:

- continue to upgrade fisheries data including the identification of important spawning and nursing areas, important littoral zone areas and shoals, streams with important to fisheries, and water chemistry data;

- prepare fisheries management plans;
- ensure that all applications for dredging and filling, clearing of aquatic vegetation, occupation of Crown lakebed, and construction of private dams are reviewed by fish and wildlife staff; ensure that all ministry work plans affecting fisheries habitat are circulated to fish and wildlife for review and where conflicts arise which cannot be settled, that such work plans require the approval of the District Manager;
- provide input to and review of municipal official plans and private sector development proposals to ensure that spawning beds and nursery areas are protected; and, in consultation with the Ministry of the Environment, ensure that water quality on cold water lakes is maintained at a level necessary to sustain present cold water fish species;
- maintain all existing fish sanctuaries and establish new sanctuaries after considering cost-benefit relationships, access, ability to enforce, impacts on existing fisheries and impact on private lands in the area;
- continue to monitor all aspects of fisheries habitat;
- provide information and support to other programs within the ministry, to municipalities and other government agencies in the protection of fisheries habitat;
- promote public interest and develop methods for positive and effective public involvement in fisheries management; and
- whenever possible, reduce water level fluctuation at times of fish reproduction through liaison with Ontario Hydro and Renfrew County Hydro.

To enhance fisheries habitat:
- improve areas suitable for the natural recruitment of fish stocks;
- clean silted spawning beds;
- provide shelter where vegetation is inadequate for fish species requirements; and
- continue to assess techniques to improve water quality conditions.

To increase and manage the supply of fish stocks:
- provide extension services to encourage the development of private sector involvement in the development of sports fisheries;
- through the implementation of fisheries management plans ensure that fish harvest is consistent with and not greater than the allowable harvest for each waterbody;
- identify and monitor harvest limits as a component of fisheries management plans;
- initiate monitoring programs to determine fish harvest; and establish means to control over-exploitation;
- consider the regulation of winter fishing on those lakes under severe winter fishing pressure;
- improve access to selected waterbodies;
- encourage the harvest of presently unutilized or underutilized species;
- rehabilitate degraded fish communities by establishing a self-sustaining population; and
- stock waters with the sports species best suited to those waters in the following order of emphasis:
  - maintaining existing populations in waters where natural reproduction is incapable of sustaining a viable fishery;
  - rehabilitating degraded fish communities by establishing a self-sustaining population; and
  - establishing an artificial population in waters incapable of supporting a natural reproducing population.

E: wildlife

1. OBJECTIVES

The objective for wildlife management in southern Ontario is to provide opportunities for social and economic benefits from wildlife recreation and fur harvest consistent with the maintenance of healthy wildlife populations.

More specific objectives are:

Hunting

- to provide opportunities sufficient to maintain the present rate of participation and quality of hunting by residents; and
- to maintain the contribution to the economy by non-resident hunters.

Trapping

- to sustain the maximum yield from furbearer populations while maintaining the present diversity of fur types.

Other Uses of Wildlife

- to prevent additional species from becoming endangered or threatened;
- to improve the status of existing endangered or threatened species with the objective of removing them from the endangered species list; and
- to maintain populations of all wildlife species (both non-game and game) at levels sufficient to:
  - provide opportunities for recreational enjoyment, aesthetic appreciation, scientific investigation, and educational uses;
  - provide benefits from tourism;
  - ensure environmental quality and ecosystem integrity; and
  - ensure the safety of the public.

2. TARGETS

The targets in Pembroke District are:[1]

Hunting

- to provide by the year 2000, 243,000 opportunities of hunting per annum, including: 63,000 opportunities of big game hunting; 138,000 opportunities of small game hunting; and 42,000 opportunities of waterfowl hunting.

Trapping

- to manage populations of wild furbearers such that an average harvest of 41,500 pelts can be achieved by the year 2000, while maintaining present species diversity.

Other Uses of Wildlife

- to ensure no native wildlife species becomes extinct.

A target for wildlife viewing has not been included owing to the difficulty of measuring this activity and of assessing the influence of management actions. Viewing targets will be defined through ongoing policy development and will be incorporated into the *Land Use Guidelines* at an appropriate opportunity.

3. DISCUSSION

During the 1979/80 season, 35,275 pelts were harvested within Pembroke District. The fur target therefore, provides for an increase in the fur harvest to the year 2000 of about 15 percent from present levels. While it is estimated that the total sustainable yield is 49,000 animals, the target is considered appropriate. Population estimates for furbearers other than beaver are not precise, and it is generally recognized that the present beaver population is at a cyclical high that will not likely be maintained over the next 20 year period without food species management.

The present (1980) population of big game animals in the district was estimated to be 8,000 deer, 400 moose and 1,800 black bear. The deer populations are well distributed throughout the district, with the exception of the northern townships.

Moose are found predominantly in the northern and northwestern portions of the district adjacent to Algonquin Park, but do not occur elsewhere in sufficient numbers for hunting.

(1) This includes the targets for the Township of Head, Clara and Maria of 1,500 fur pelts, 3,000 big game opportunities, 1,000 small game opportunities and 1,000 waterfowl opportunities.

Bear are well distributed in the district with higher concentrations in the northern portions adjacent to Algonquin Park. Most hunting is done in this area during the spring season, although some bear are taken in the fall, during the deer and moose hunting seasons. In the past, during summers when food was scarce, bears have created problems for farmers and have also become a nuisance in built-up areas.

The big game species found within the district now provide 10,000 hunters with 50,000 hunting opportunities with a success rate of 10 percent. The target for big game hunting provides for a moderate increase in use (20 percent) accompanied by an increase in hunting success to 20 percent from the present. Achievement of the target requires a doubling of the present deer population. That is, target achievement is contingent upon re-establishing the historical 1959 deer herd in the district. Moose and bear populations however, may be maintained at their present level. These levels are well within the capability of the present habitat. However, in the face of expanding deer populations, some decline in moose populations may be expected.

The district is not situated within a major waterfowl flyway, however, it still provides excellent waterfowl hunting opportunities. Areas such as the Mud Lake and Snake River marshes, Bellow's Bay on the Ottawa River, Calabogie and White Lakes along the Madawaska River system, and Conroy Marsh are particularly popular.

Hundreds of beaver marshes throughout the district also provide necessary nesting and rearing habitat. Posting of private land however, restricts some hunting opportunities provided by these marshes.

Small game hunting for ruffed grouse and varying hare is well distributed across the district, with the only limitation being access to private land.

The district has the capability to support 573,000 small game animals and 120,000 waterfowl. The potential sustainable yield for small game is 229,000 animals and for waterfowl 36,000 birds.

Present (1980) data indicates that about 110,000 small game animals are harvested each season providing 110,000 hunting opportunities. The harvest of waterfowl consists of approximately 34,000 birds per season, providing 34,000 hunting opportunities.

The targets for small game and waterfowl hunting provide for present rates of participation in those activities to be maintained at present levels of success (average 1 animal harvested per outing). The targets therefore, provide for a moderate (20 percent) increase in small game and waterfowl hunting opportunities consistent with the anticipated increase in the Ontario population and related demand in Pembroke District. Present populations of small game and waterfowl in the district are capable of supporting this increase, provided that existing habitat is maintained.

It is expected that the rate of participation in wildlife viewing will increase with human population growth and the rising interest. Management programs designed to improve wildlife habitats and increase wildlife populations will benefit wildlife viewing. In addition, certain habitats may have to be maintained and some site specific restrictions may have to be placed upon hunting and trapping.

Achievement of the trapping and hunting targets and viewing opportunities are dependent upon the maintenance and enhancement of wildlife habitats, particularly deer yards and wetlands on both Crown and private land. (See Map 5.)

It is recognized, however, that certain areas in the district have an over-population of deer resulting in conflicts with other land uses. Management effort in these areas will not be directed to increasing herd population levels.

Additionally, achievement of wildlife targets requires that access to all lands should be maintained or improved.

4. PROGRAM STRATEGY

a. General

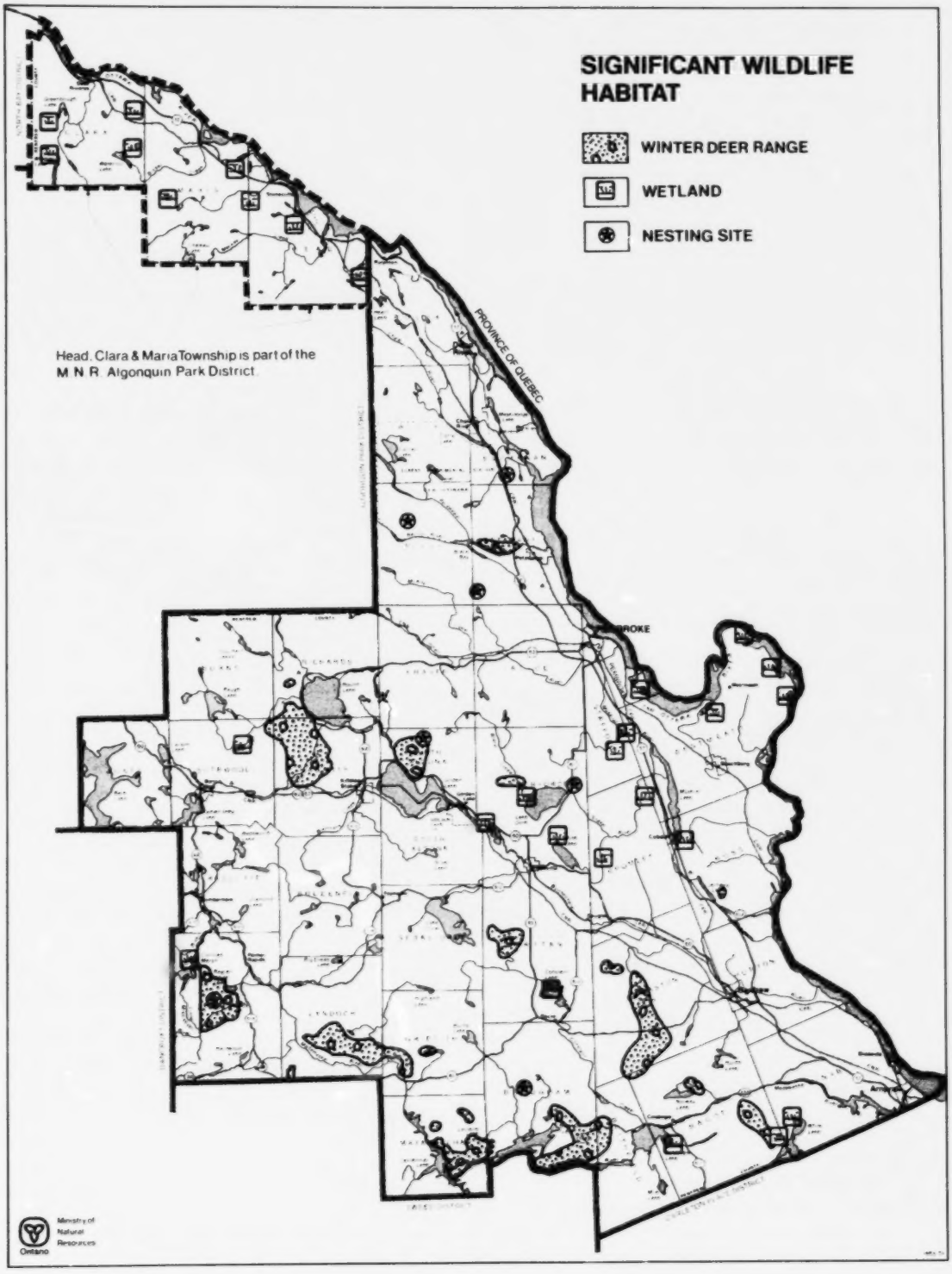
- protect, conserve and manage all wildlife species (both non-game and game) on public and private lands;
- identify endangered, threatened or rare species; significant populations of wildlife species (both non-game and game); and protect or manage these populations if the best available scientific, social and economic data indicate that such action is necessary to achieve wildlife objectives;
- maintain and enhance critical wildlife habitats and create new habitats where appropriate;
- protect identified deer yards by:
  - managing or encouraging their management including supplementary feeding, browse cutting, trail packing and predator control;
  - restricting all ministry management and operation activities which could conflict with deer populations or habitat require-

MAP 5

PEMBROKE DISTRICT

M.N.R. Administrative District
Area included for District Planning
Province
County
City, Town, Village, Township
Community
Indian Reserve
Provincial Park
Air Base
Provincial Highways
Railways

5 0 5 10 15 20 Kilometres
5 0 5 10 15 Miles



ments within deer yards, including the disposition of Crown rights;
  - managing or encouraging the management of vegetation within deer yards in accordance with approved deer yard management plans;
  - permitting extraction of aggregate, recreation trail development, and development of access roads in deer yards only where it can be demonstrated to the satisfaction of the District Manager, that such activity would not have negative impact on deer populations or their habitat; and
  - recognizing that as deer yards shift over time, management prescriptions designed to maintain winter range requirements of deer may have to be applied beyond areas now identified as yarding areas;
- enhance summer range for deer where consistent with forest management by encouraging:
  - a diversity of interspersion of cover vegetation;
  - sufficient disturbance of the forest by logging to maintain a large proportion of range (ideally greater than 30 percent) in a state of early succession;
  - the creation of 5 to 15 percent of the range in permanent forest openings located in proximity to deer yards, and interspersed throughout the range. These openings should be less than 2 hectares (5 acres) in size, irregular in shape, and maintained in grasses and other herbaceous plants;
  - clear cutting in hardwood stands, providing the size of clear cut does not exceed 40 hectares (100 acres); and
  - the management of oak stands to add to the food supply for deer;
- enhance habitat for moose in Head, Clara and Maria Township where consistent with forest management practice by:
  - encouraging as much disturbance as possible to hardwood stands through selective timber harvest in moose range to provide animals with clearly successional plant communities;
  - protecting and maintaining 10 to 15 percent conifer cover, notably balsam fir and spruce, evenly distributed throughout the range in patches greater than 6 hectares (15 acres) in size;
  - encouraging and maintaining shelter stands to promote a mixed wood species composition with at least 30 percent of the stand in conifers that are over 6 metres in height;
  - controlling road access and recreational trail development; and
  - identifying and protecting aquatic feeding areas and mineral licks;
- improve small game habitat by encouraging the maintenance of fence rows and small game habitat by creating drumming sites for grouse where required;
- improve waterfowl habitat by:
  - promoting the management and maintenance of wetlands suitable for waterfowl production;
  - draining unproductive beaver ponds;
  - providing duck nesting boxes in suitable areas where existing nesting trees are scarce;
  - providing nesting trees in modified management areas; and
  - regulating water level fluctuations where possible to provide suitable productive areas;
- improve the habitat for non-game species by:
  - encouraging the management of habitat to provide a diversity of plant communities;
  - establishing modified management areas around critical habitat;
  - ensure nesting trees and denning sites are retained throughout the district;
  - ensuring no disturbance of nesting and other critical wildlife habitat by logging or other land uses during critical times of the year; and
  - encouraging private landowners to manage lands consistent with wildlife habitat management practices;
- manage furbearers and their habitat by:
  - encouraging the retention and proper management of all lands and waters presently used to produce furbearing animals;
  - promoting greater use of private lands for furbearer production;
  - maintaining and increasing cover and food supply, particularly in poplar, bordering all waterbodies;
  - retaining registered traplines on Crown lands;
  - promoting private land fur management areas and trapping on a contiguous area of land by trappers;
  - promoting natural water level fluctuations wherever possible. Where water levels are controlled, encourage fluctuations consistent with wildlife management requirements; and
  - promoting better fur harvest, fur management and conservation practices;
- maintain ministry access and encourage the retention of municipal access to lands important for wildlife harvesting;
- encourage the provision of appropriate access to lands important for wildlife uses; and
- take specific control action where wildlife destroys domestic animals, or where wolves and coyotes harass deer in yarding areas.

b. Program Implementation

To protect wildlife areas:

- continue to inventory and assess wildlife populations and their habitat, and incorporate

relevant information into the *Land Use Guidelines* and management plans of other programs as appropriate;

- prepare management plans for all critical wildlife habitats. Where critical habitat areas are located on private land, provide information and assistance, or enter into wildlife management agreements with the property owners to protect habitat;
- monitor the impact of mineral exploration on deer yards to determine whether controls on exploration are necessary;
- acquire critical habitat areas where necessary and feasible;
- ensure that wildlife staff review all activities proposed within deer yards and significant moose range;
- provide review by wildlife staff, of all applications for control or alteration of water levels and shoreline improvements; and
- provide input to and review municipal official plans and by-laws and specific development proposals to identify important habitat and protection measures.

To ensure the proper management of habitat necessary for wildlife production ensure that:

- deer range management prescriptions are established based on site conditions, including available cover and browse, number of deer present, and anticipated future needs of the deer in the area;
- consideration is given to amending this document to incorporate appropriate management prescriptions for all important wildlife habitats identified subsequent to its approval. As an interim measure, once new sites are identified, the district will consider establishing guidelines for these areas consistent with the requirements of habitat management; and
- wildlife values of wetlands are protected in ministry management activities and in the review of private sector development proposals;
- timber harvesting in deer yards is conducted in accordance with deer habitat requirements as identified in deer yard management plans, and all harvesting prescriptions are developed in conjunction with wildlife staff;
- where required, contractors are hired or incentives are paid to timber operators to conduct specific wildlife range management;
- proper wildlife management prescriptions are established in all modified management areas prior to cutting approvals or any other management work;
- the wildlife extension program is continued and expanded to increase public understanding and involvement in wildlife management. Specifically, district staff will continue to make available relevant information, will make presentations to, and seek the advice of interested groups, and will provide habitat management consulting service to landowners;
- consideration is given to wildlife management potential in the preparation of *Woodlands Improvement Act* agreements;
- permits are not issued for aquatic plant removal in areas of significant wild rice production, such as Bellows Bay and Castleford on the Ottawa River, Grassy Bay on Calabogie Lake, and Conroy Marsh in Raglan Township;
- timber management and operating (including roads) plans are reviewed by wildlife staff; and
- where management plans do not exist, all relevant annual work plans will be circulated to wildlife staff for review prior to the approval of the District Manager.

To protect and manage wildlife populations:

- provide enforcement of the *Game and Fish Act* sufficient to maintain wildlife populations;
- undertake supplementary deer feeding where necessary;
- encourage the public to participate in co-operative supplementary feeding programs where warranted;
- provide assistance to landowners in dealing with nuisance animals;
- establish a monitoring program to assess the impact of management programs on wildlife populations;
- develop a public education program to encourage better management and use of the resource;
- work cooperatively with government agencies at the federal, provincial and municipal levels, and with private landowners, developers and other members of the private sector to achieve the protection of all wildlife resources (both non-game and game);
- encourage greater non-government participation in the identification and management of wildlife, in particular endangered, threatened or rare species; and
- provide extension services which promote an understanding of the value of wildlife resources (both non-game and game), and non-consumptive uses, and which enhance social benefits and tourism.

To contribute to the achievement of overall ministry objectives within Pembroke District, all wildlife management plans will be circulated to all programs for comment.

F: provincial parks

1. OBJECTIVES

The objectives of the provincial parks system in southern Ontario are:

Protection

- to protect provincially significant elements of the natural and cultural landscape of Ontario;

Heritage Appreciation

- to provide opportunities for exploration and appreciation of the outdoor natural heritage of Ontario;

Recreation

- to provide provincial park recreation opportunities ranging from high intensity day use to low intensity wilderness experience; and

Tourism

- to provide Ontario's residents and out-of-province visitors with opportunities to discover and experience the distinctive regions of the province.

2. TARGETS

To achieve these objectives, the targets for the provincial parks system in Pembroke District are:

Protection

- Earth Science[1] to protect provincially significant representative and special earth science features in Pembroke District which contribute to the representation of the thirty-five geological environments in southern Ontario;
- Life Science[2] to protect provincially significant life science features in Pembroke District which contribute to the representation of each vegetative site type in the twenty-six site districts in southern Ontario;
- Historical Resources[3] to protect provincially significant landscape-related prehistorical and historical resources in Pembroke District which contribute to representation of the fourteen themes of southern Ontario's history;

Heritage Appreciation

- to provide opportunities for exploration and appreciation of the outdoor natural and cultural heritage of Pembroke District; and

Recreation and Tourism[4]

- to provide annually, by the year 2000, the following recreation opportunities for residents and visitors to provincial parks in Pembroke District:
  - Day Use
    108,000 swimming opportunities
    55,000 picnicking opportunities
  - Extended Use
    95,000 camping opportunities
  - Backcountry
    10,000 backcountry opportunities.

3. DISCUSSION

The ministry recognizes that outdoor recreation is important for tourism and social well-being. It also recognizes that physical, biological, cultural and historical resources are important elements in the environment and that representative and unique components should be protected.

Provincial parks are important means of providing recreation and tourism benefits, and of protecting important resources. The provincial parks system is permanent, distinctive, representative, varied and accessible. It is complementary to private sector facilities and to those of other public agencies.

(1) Specific emphasis will be placed on features of the Central Metasedimentary Belt (Renfrew Continuation), Paleozoic outliers, and the Wisconsin stage of glaciation.

(2) Specifically site districts 10, 11 and 12 of site region 5E will be represented.

(3) Specific emphasis will be on the prehistoric, forest industry, agriculture and mining theme segments.

(4) The targets for recreation and tourism are expressed in terms of opportunities to swim, picnic, camp and canoe trip in provincial parks. These activities have been chosen as representative uses because quantifiable facilities are required for them. Other activities occur and are important in provincial parks; however, the selected activities are measurable and provide useful indicators of the amount of activity occurring.

The provincial park objectives will be achieved through specific park classes and zones within these classes. There are six classes of provincial parks: wilderness, nature reserve, historic, natural environment, waterway and recreation. Protection targets may also be achieved through agreements with other agencies and private landowners.

To assist in meeting the protection objective, the ministry is identifying a system of areas of natural and scientific interest.

Areas of natural and scientific interest are areas of land and water containing natural landscapes or features which have been identified as having values related to protection, natural heritage appreciation, scientific study or education.

Areas of natural and scientific interest may vary in level of significance. The most significant may contribute to the achievement of the ministry's protection objective.

Areas of natural and scientific interest encourage the protection of additional areas not regulated as provincial parks and provide a focus for both the public and private sectors to contribute to the protection of Ontario's natural heritage.

Within the context of areas of natural and scientific interest, the ministry has identified a number of significant earth and life science features within the district. A number of these features occur in existing and candidate parks including Centennial Lake, Bell Bay, Westmeath, Bonnechere River and Lower Madawaska River candidate parks as identified in Table 1. Others occur on private land. Appropriate protection will be sought through agreements with private landowners.

Two additional sites having potential as areas of natural and scientific interest have recently been identified and are being examined to determine their significance. These are sites on the Muskrat River (earth science features) and the White Lake Fen (life science feature). Should study confirm the significance of these sites, modification may be necessary to the *Land Use Guidelines*.

When studies of earth and life sciences, and historical resources are completed, additional areas for nature reserves, historical parks or areas of natural and scientific interest may be identified.

The targets recognize the importance of Pembroke as a recreation and tourism area, and the significance of the recreational resources of the district. The target provides for an increase in the provision of provincial park recreation and ensures the continued availability of whitewater canoeing in a relatively remote setting in southern Ontario. Several of the candidate parks contribute to the achievement of recreation and tourism targets including the Bell Bay, Lower Madawaska River, Bonnechere River, Ottawa River, Westmeath and Foy Property proposals.

The Barron-Petawawa River was also selected as a proposed candidate park. However, because of possible land use conflicts and public safety concerns associated with its proximity to the Petawawa Military Reserve, it has not been included in this document as a candidate provincial park. In the event that these concerns can be resolved, the Barron-Petawawa River will be considered as a candidate provincial waterway park owing to its high quality backcountry recreation potential.

Map 6 shows existing and proposed recreational facilities while Table 1 identifies how the existing and candidate parks contribute to the achievement of the parks' targets.

There are a number of serious concerns with regard to the establishment of new parks in Pembroke District. These include:

- the appropriate treatment of traditional uses such as timber harvesting, production-oriented silviculture, hunting and trapping, particularly where some form of commitment to use has been made as in the case of timber licences;
- the difficulty, high cost, and social disruption of acquiring private lands; and
- the potential land use conflicts with adjacent landowners and existing commercial recreational establishments.

4. PROGRAM STRATEGY

a. General

- maintain Driftwood as a recreation class park;
- maintain Bonnechere as a recreation class park and pursue the concept of shifting the day use facilities to the Foy property after environmental assessment;
- retain:
  - Bell Bay and Westmeath as candidate natural environment parks;
  - portions of the Madawaska, Bonnechere and Ottawa Rivers as candidate waterway parks; and
  - Centennial Lake as a nature reserve park;
- assess the appropriateness of retaining Carson Lake as a provincial park;
- verify through master planning, the appropriateness of retaining Matawatchan and establishing Centennial Lake as nature reserve parks;

MAP 6

PEMBROKE DISTRICT

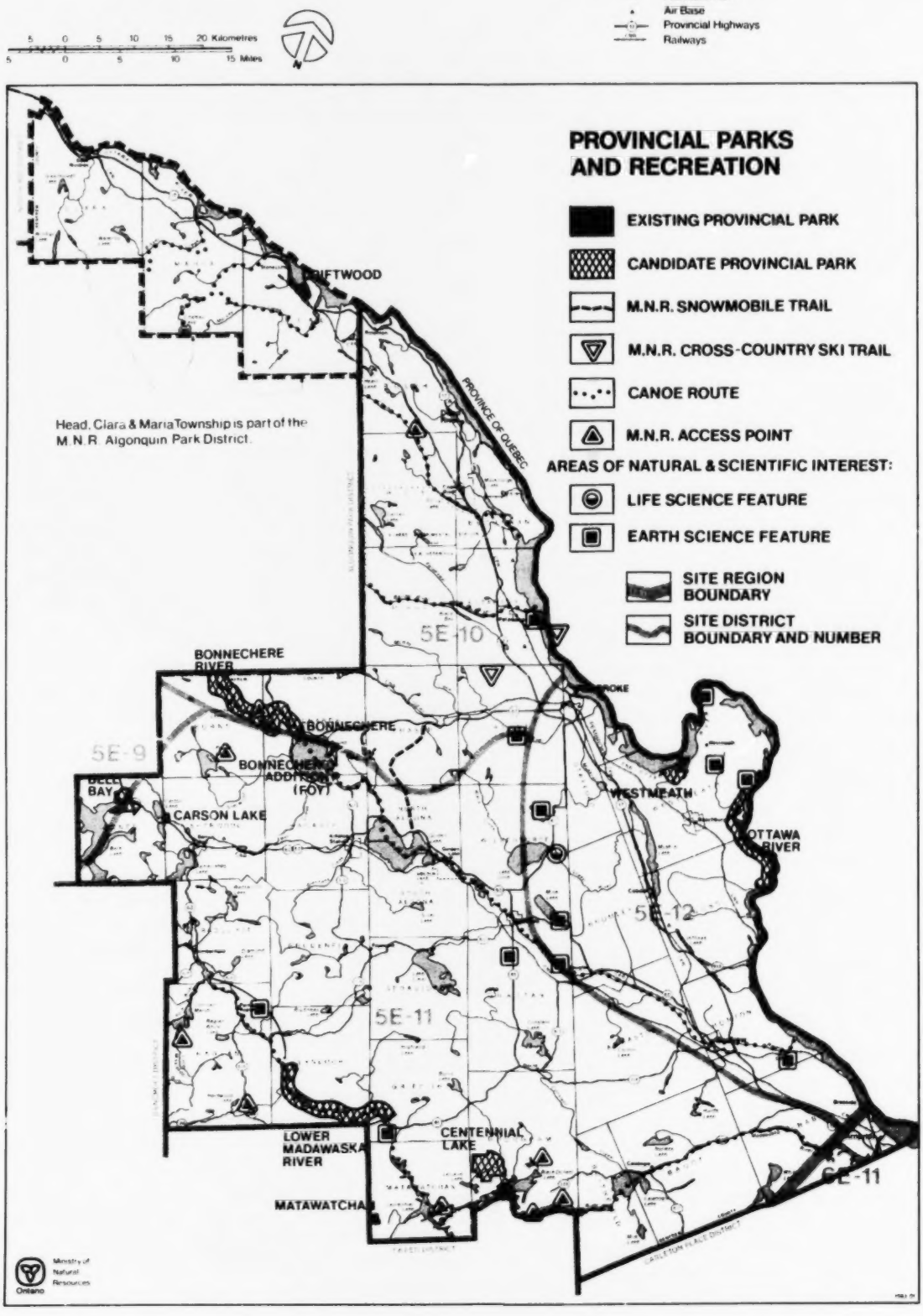


TABLE 1 ACHIEVEMENT OF PROVINCIAL PARK TARGETS IN PEMBROKE DISTRICT

Sites	Management by Park Class or Agreement	Protection/Heritage Appreciation			Recreation/Tourism Opportunities (000's)			
		Earth Science	Life Science	Historical	Swimming	Picnicking	Camping	Back-country[1]
Existing Parks								
Bonnechere	REC	L	R	U	6	26	24	
Carson Lake	REC	—	—	—	1	1	10	
Driftwood	REC				11	4	17	
Matawatchan	NR	L	R	—	—	—	—	
Candidates:								
Bell Bay	NE	R	P	R	7	2	17	
Bonnechere River	WATER	R	P	R	—	—	—	2
Centennial Lake	NR	P	P	R	—	—	—	
Lower Madawaska	WATER	P	P	P	3	2	11	4
Ottawa River	WATER	R	U	U	—	—	—	4
Westmeath	NE	P	P	U	54	11	16	
Foy Property (add'n to Bonnechere Park)	REC	—	—	—	26	9	—	—
Other Areas of Natural and Scientific Interest								
Bonnechere Caves	AGREE	P	U	U				
Pretty's Hill	AGREE	R	U	U				
Petawawa Fish Hatchery	AGREE	R	U	U				
Shaw Woods	AGREE	L	R	U				
Davis Mills	—	R	U	U				
Green Lake Esker Bog	—	L	U	U				
LaPasse Pipeholes	—	R	U	U				
Lochwinnoch Landslide	—	R	U	U				
Madawaska Extension	—	R	U	U				
McGrath Meltwater Cl.	—	L	U	U				
Mink Lake Moraine	—	L	U	U				
Rapides Pacquette	—	L	U	U				
Total					108	55	95	10

Notes: Park Classes
NE — Natural Environment
NR — Nature Reserve
REC — Recreation
WATER — Waterway
AGREE — Agreement

Resource Significance
P — Provincial
R — Regional
L — Local
U — Unknown
— — Nil

(1) In Pembroke District, existing provincial parks are not managed to provide backcountry recreational opportunities. Backcountry recreation includes canoe tripping in remote areas.

- ensure that park values in all the candidate parks are protected;
- encourage uses in candidate parks which complement the achievement of park objectives. Uses which have no significant negative impact on the long-term achievement of park objectives will be permitted with judicious controls; and uses which would conflict with the long-term achievement of park objectives will be prohibited
- continue to inventory areas of natural and scientific interest and to identify and institute appropriate measures to provide protection for the identified values;
- develop and conduct management activities within provincial parks in accordance with approved master plans; and
- encourage private lands adjacent to parks to be managed in a manner consistent with the objectives for the park.

Prior to proceeding with the development of the Bell Bay, Bonnechere River, Ottawa River, and Centennial Lake candidate provincial parks:

- evaluate and determine the specific lands required for park purposes;
- examine the necessity of acquiring private land and identify viable alternatives to fee-simple acquisition;
- determine the economic impact of establishing a park on the local area; and
- identify activities and uses which will be displaced and determine the means whereby associated impacts can be minimized.

b. Program Implementation

To implement these provisions:

- develop master plans which will guide all management activities for all parks within the district;
- involve all services in the preparation and review of master plans;
- prepare vegetation, fisheries, and wildlife management plans for each existing park within the planning area. These plans will form part of the management operating plans for each park. The expertise of fish and wildlife, and forest management staff will be sought in the preparation of these plans;
- prepare management guidelines for all candidate parks to be circulated to all programs and approved by the District Manager. The plan will identify significant resources and traditional uses and provide direction as to their management as well as identify permitted uses. These management guidelines will reflect the planning and management policies for the intended class of provincial park;
- permit mineral exploration, and consider permitting extraction in candidate parks under controlled conditions in accordance with the mineral resource and integrated resource management policies of this document;
- identify and designate all provincial parks and candidates as part of the ministry's input to any planning program conducted by other levels of government, public agencies or the private sector, in order to protect park values;
- review all management plans and work permits in areas within or adjacent to existing parks to minimize potential land use and water conflicts;
- where areas of natural and scientific interest occur on public land managed by the ministry, the ministry will ensure that the land uses and activities which occur provide for the protection of the identified values;
- where areas of natural and scientific interest occur on private land, the ministry will ensure that landowners are aware of these features and seek cooperation in their protection. This does not necessarily indicate any intent of the ministry to acquire such land or to restrain or prevent any private use of land;
- maintain a registry of areas of natural and scientific interest; and
- seek to identify, document, and protect significant earth science, life science, and landscape-related prehistorical and historical resources.

G: general recreation

1. OBJECTIVES

The ministry's recreation management efforts are directed primarily to hunting, fishing and provincial parks. There are a number of other activities which the ministry carries out for which no objectives have been developed. Tentative objectives for general recreation activities are:

- to provide and to encourage a wide variety of outdoor recreation opportunities ranging from day use to backcountry experiences;
- to identify, select and protect provincially significant natural and cultural resources; and
- to provide an economic contribution through tourism.

2. TARGET

Specific targets for general recreation in southern

Ontario have not been established as yet by the ministry. However, in the Algonquin Region, future demands for typical general recreation activities were developed to assist districts in retaining the option of providing additional opportunities and by supporting the maintenance of existing facilities.

3. DISCUSSION

In addition to providing recreation opportunities and protection through the provincial parks program, the ministry has an interest in providing or encouraging these benefits from all land. The Ottawa and other rivers of Pembroke District have a significant, although largely unrealized, recreation potential. They also provide an ideal opportunity to demonstrate and interpret associated history. Both of these aspects are recognized by the ministry and are reflected in proposals regarding the establishment of provincial parks in Pembroke District.

The objective also recognizes that the ministry, in conjunction with other government agencies and the private sector, has the responsibility to provide for a wide variety of recreation activities in Pembroke District including camping, swimming, boating, canoeing, cross-country skiing, snowmobiling and hiking.

The ministry can contribute to the achievement of general recreation objectives by providing trails and other recreation facilities on agreement forest lands, wildlife management areas, and other Crown lands.

Currently on Crown land, Pembroke District provides: 10,000 hiking opportunities from 40 kilometres of hiking trails; 83,000 snowmobiling opportunities from 400 kilometres of trails; 19,000 cross-country skiing opportunities on 45 kilometres of trails; and maintains 10 access points to water.

In Pembroke, additional future demands (year 2000) for selected general recreation activities appear to be as follows: 11,000 backcountry opportunities requiring 185 kilometres of canoe routes; 121,000 snowmobiling opportunities requiring 700 kilometres of trails; 34,000 cross-country skiing opportunities requiring 80 kilometres of trail; and 39,000 hiking opportunities requiring 155 kilometres of trails.

Furthermore, to maintain consistency with the tentative objectives, the district should give consideration to the protection of significant natural and cultural features, and protection to the Upper Ottawa Valley and inland lake and river recreation-tourism landscape. The district should also encourage and support complementary private sector development.

Numerous groups and agencies also contribute to the achievement of these objectives by developing trails and other recreational facilities, and protecting significant natural and cultural resources. The ministry will continue to rely on others for the provision of many of these opportunities. This means that meeting future needs may be contingent upon the participation of these groups.

The ministry can assist groups and agencies through the granting of permission to develop recreational trails on appropriate public lands. The ministry will also maintain contact with local trail clubs, and provide advice on the development and management of facilities by these and other suppliers of general recreation.

As a general interim strategy, until a ministry general recreation policy is developed, the district will ensure that future options for general recreation remain open on Crown land; maintain the present level of service on Crown land; and will continue to cooperate in the provision of recreation opportunities by the private sector.

4. PROGRAM STRATEGY

a. General

- participate in efforts to improve the coordination of assistance programs by cooperating with and assisting municipalities and private organizations in acquiring, planning and developing recreation areas and facilities;
- permit recreational use of Crown land with minimum restrictions considering other resource uses and the environment;
- encourage the private sector to provide a base for recreational activities on Crown land;
- manage and encourage the development of canoe routes, trail systems, and access on both Crown and private land;
- conduct its activities so as to maintain or enhance the quality of the recreation landscape;
- where possible, maintain flexibility in the management of Crown land, to accommodate Crown land recreation requirements identified in the future; and
- accommodate the need of Crown land recreation by complementary scheduling of timber operations and locations of access roads.

b. Program Implementation

To implement the general recreation policies:

- require that all management plans be circulated to the parks staff for review; and

- recognize the general Crown land recreation requirements in all management planning, and provide for the incorporation of special management policies where necessary.

H: land administration

1. OBJECTIVE

The objective for land administration in the ministry in southern Ontario is to facilitate the orderly development and conservation of Ontario's land and water resources.

2. TARGET

Owing to the service-oriented nature of the land administration program, specific targets have not been assigned.

3. DISCUSSION

The general strategy for land administration is to act in a coordinating role in presenting ministry concerns to the public and outside agencies and to administer all Crown lands in the best public interest. As such, the policies of the lands program are an important means to implement the programs of all ministry services. Crown lands are shown on Map 7.

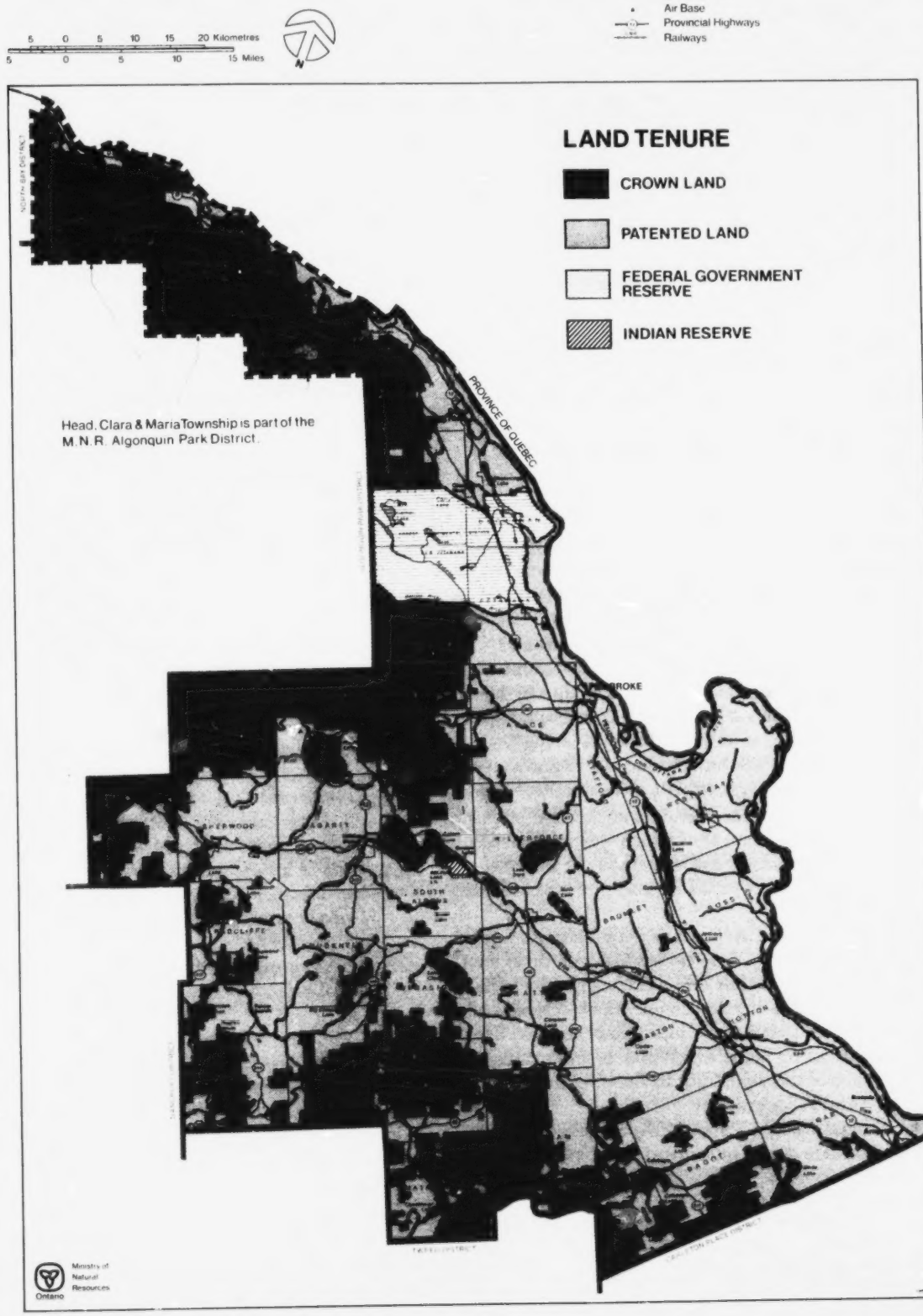
4. PROGRAM STRATEGY

a. General

- manage Crown lands consistent with the requirements of all ministry programs;
- acquire private lands which are recognized to meet ministry objectives;
- review all acquired lands annually to ensure that they are still required for ministry programs. Those lands which are no longer required will be identified as surplus and disposed of;
- manage all acquired lands in accordance with approved interim property management plans, and in such a manner as not to compromise the proposed final use for the lands;
- require interim property management plans to identify permitted uses consistent with the objectives for which the property was purchased, priorities, and standards for management;
- dispose of Crown lands, wherever appropriate to assist in the achievement of ministry objectives, and to provide for orderly economic development. Disposition will only be considered where there will be significant benefits to the Crown and the public;
- create no new Crown cottage lots or hunt camps;
- discourage disposal of Crown land for private residential purposes outside established communities, and for purposes for which the private sector is meeting demand;
- implement the requirements of the Algonquin Park master plan within one mile of the park boundary;
- permit existing authorized uses of Crown land to remain, providing that they do not conflict with the intended use of the land or violate the terms and conditions of tenure and remove unauthorized non-conforming uses;
- review and provide input into the plans and proposals of other agencies and the public to ensure that they will not adversely affect the ministry's ability to achieve its objectives, and to ensure that the provincial hazard lands policy is incorporated to prevent loss of life and to minimize property damage and social disruption;
- operate and manage waste disposal sites and gravel pits on Crown land in unorganized townships in accordance with approved management plans;
- reserve waste management sites under Section 43 of the *Mining Act*; and
- determine water navigability for district administrative purposes only (for implementation of minor programs or protection of program interests) and not for the private sector.

MAP 7

PEMBROKE DISTRICT



b. Program Implementation

To implement the intent of the above policies:

- in the acquisition of any properties in the Algonquin Park buffer zone, give priority to those which have the greatest impact on existing or planned public recreational use;
- proposals to declare lands as surplus will be circulated to all ministry programs for review;
- prepare interim property management plans by the client branch in conjunction with lands staff and with input from other services. All plans will be reviewed by all programs prior to approval of the District Manager;
- prior to the disposition of Crown lands:
  - ensure that the proposed use is consistent with the policies of this document;
  - review and analyse the proposal to determine the need, economic impact and compatibility with existing and proposed uses in the vicinity;
  - determine the impact on ministry programs;
  - ensure that the terms and conditions of tenure are consistent with the identified need for the land;
  - accommodate municipal requirements and commercial or industrial development within municipalities by permit, licence, lease or qualified sale and patent;
  - generally dispose of lands for pipelines by easement;
  - dispose of land to other provincial ministries or to the federal government; and
  - generally, ensure that the proposed and actual use of the land will be consistent with municipal official plans and zoning by-laws, and provincial and federal agency plans;
- only dispose of Crown lands within the Algonquin Park buffer zone where necessary to meet the requirements of timber licencees.
- require, where the use of an authorized site has changed from that which was approved, that it be phased out; relocated; or the conditions of approval be revised to accommodate the new use;
- ensure that private land development proposals are circulated to and reviewed by all programs to ensure that they will not unduly affect the ministry's ability to achieve its objectives and to ensure that inappropriate development does not occur on lands which may be hazardous by reason of susceptibility to flooding or unstable topography;
- circulate all requests for disposition, approvals of private dams, authorization of unauthorized occupations, applications for dredging or filling, issuance of quarry permits and approvals for roads over Crown land to all programs for review and comment;
- prepare five year operating plans for all Crown land waste management sites;
- consider applications for disposition of road allowances and generally not object to disposition providing such disposition;
  - involves only the area above the present high water mark;
  - does not result in the loss or deterioration of critical resource areas; and
  - does not involve areas traditionally used by the public for access to or egress from the water (e.g. portages).

I: water & fire management

1. OBJECTIVES

There is no separate objective for water and fire management as they are part of the overall land and water program. However, this activity is designed to control water levels and to provide fire prevention, protection and control services in such a manner as to accommodate, to the extent possible, the requirements of other ministry programs.

2. DISCUSSION

The district water and fire management responsibility is part of the field services activity which provides support services for all other ministry programs.

The major responsibility of water level control in Pembroke District lies with Ontario Hydro and Renfrew Hydro. The ministry issues water power leases to these agencies which specify maximum and minimum elevations for the controlled waterbodies within the district. Controlled waterbodies include the Ottawa, Bonnechere and Madawaska Rivers. The ministry itself controls approximately 20 percent of the controlled water area within the district. This includes White Lake and the Lake Dore-Muskrat River system. Water levels for these areas are controlled in accordance with existing agreements with cottage associations, Renfrew Hydro, and Ontario Hydro.

As noted previously under the discussion of public safety, the ministry is responsible for forest fire management in Ontario.

The fire management program performs a support function that provides expert knowledge and specialized services in matters of fire control and fire use within and outside the ministry. These services relate to preventing the occurrence of wild fire, ensuring that each fire in the district will receive a response, controlling wild fires that threaten values, and using prescribed fire as an approved management technique. Fire risk zones are shown on Map 8.

Forest fire protection is provided by the ministry or municipal agencies where they have the capability. The ministry can play a significant role in developing municipal expertise in improving fire safety, and use of fire and emergency planning.

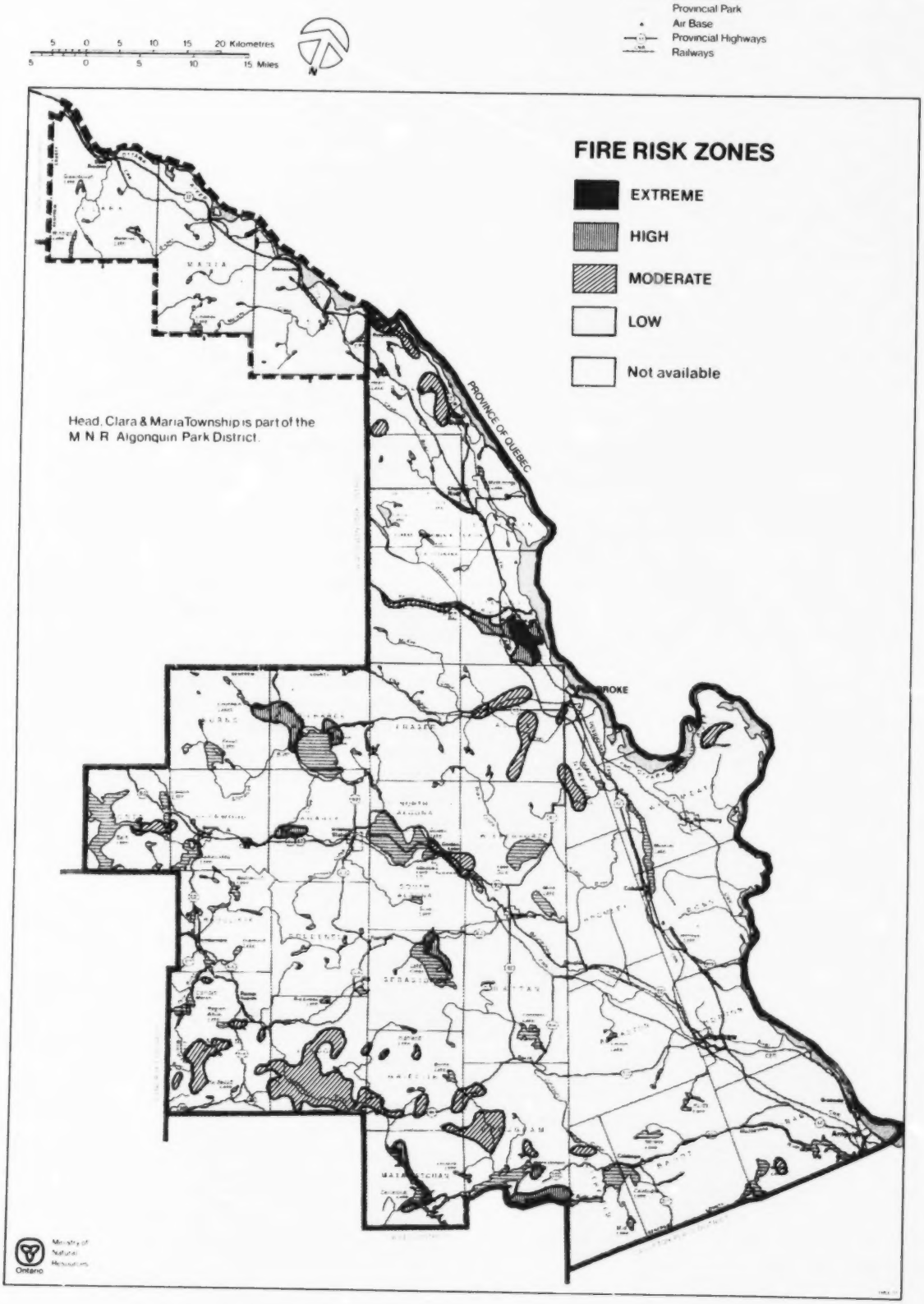
3. PROGRAM STRATEGY

a. General

- regulate water levels on ministry controlled waterbodies in accordance with existing agreements with cottage associations and utilities;
- regulate water levels for multiple use and flood protection within the limits established by the agreements;
- recognize the implications of man-made water level fluctuations on fish and wildlife resources and, to the extent possible, regulate water levels in a natural fluctuation pattern;
- ensure that the impacts on fish and wildlife resources are fully considered prior to the regulation of waterbodies not previously regulated, or where changes in present levels or schedules of regulation are proposed;
- institute emergency measures for flooding in accordance with the approved flood contingency plan;
- ensure that all program interests and negative impacts upon the environment and other uses are considered in the construction of dams or in the approval of private dam proposals;
- suppress all wild fires in a manner consistent with ministry policy and the following priorities: human safety; public works; private and public property; and natural resources;
- implement an effective fire detection system in the district consistent with provincial policy;
- implement a fire prevention program;
- ensure adequate pre-fire suppression preparedness;
- encourage development and resource extraction activities that are designed to reduce the possibility of fire;
- curtail ministry activities and activities of the public where necessary and appropriate at

MAP 8

PEMBROKE DISTRICT



times of high fire hazard;
- act as the lead agency in a planned program for response to forest fire and flood emergencies; and
- continue prescribed burning consistent with other program objectives and implemented in a manner consistent with ministry policy and procedures.

b. Program Implementation

To implement these directions:
- improve the monitoring of water levels on all ministry controlled waterbodies;
- develop operating plans for all ministry water control structures;
- provide input to, and review of, operating plans for water control structures operated by other agencies and the private sector;
- monitor the effects of water fluctuations on fish and wildlife concerns;
- encourage municipalities to prepare and maintain flood emergency response plans;
- develop, implement and maintain an effective fire detection plan, an annual fire operating plan, and a fire prevention plan;
- develop cooperative fire prevention and control agreements with municipalities, railway and forest industries;
- train fire staff, non-fire staff, municipal volunteer fire brigades and railway personnel in forest related suppression activities;
- establish, implement and maintain fire prevention agreements as provided for in the *Forest Fires Prevention Act* (e.g. agreements with municipalities, railways); and
- ensure relevant fire input into fire management, fish and wildlife and parks and recreation management plans.

To achieve ministry objectives a high degree of management integration must occur. This is necessary both in the use of the resource and in the delivery of programs.

Multiple use resource management will be carried out and the objectives of a number of programs will be achieved in the same area. However, it is recognized that some activities are not compatible and that separation of activities may be necessary.

Where restrictions involve large areas of land or water, special designation of these areas may be necessary. Where restrictions involve relatively small areas of land and water, special identification may not be necessary but the sites must be protected by special management.

The principle of management integration is reflected through the preceding section on program policies. In addition, the following policies on significant program areas, areas of special interest, modified management areas, resource access, and general resource areas are designed to assist the ministry in the achievement of its program objectives.

A: significant program areas

1. OBJECTIVE

The Ministry of Natural Resources in Pembroke District will seek to protect significant program areas.

2. DISCUSSION/STRATEGY

Significant program areas are sites which clearly contribute to the achievement of ministry targets and which may require some measure of protection or special management if targets are to be achieved.

Significant program areas are normally small site-specific features. Examples are spawning beds and nursery areas for fish, habitat of endangered species, representative plant communities and winter deer yards. Many of these sites, in particular the more extensive areas, have been designated in the *Land Use Guidelines*. Others have not been identified since some sites (e.g. eagle nests) are very sensitive to the type of human activity which might be encouraged by their identification, and in other cases inventories are incomplete.

The ministry will protect significant program areas when undertaking its activities and will encourage the protection of such sites on private lands through the municipal planning process. As new sites or resource areas are identified, these will be treated as significant program areas.

B: areas of special interest

1. OBJECTIVE

The ministry will attempt to carry out its management activities such that areas of special interest are not destroyed.

2. DISCUSSION/STRATEGY

Areas of special interest include site-specific features and resources of public interest which are not specifically related to program targets.

Examples include unique site-specific habitat for wildlife other than endangered species or species specifically managed for hunting and trapping. Also included are features of cultural interest.

To ensure that ministry activities do not unnecessarily destroy these features, the ministry will maintain an up-to-date listing and mapping for consideration in resource management and use.

The ministry will also identify such areas to municipalities and other agencies in the plan approvals process. However, the ministry will not oppose private development in order to protect these features.

C: modified management areas

1. OBJECTIVE

Modified management areas will normally be provided on Crown land and encouraged on private land, on all shorelands. Modified management areas may also be provided or encouraged in other areas such as along roads and designated trails.

The purpose of modified management areas is to maintain or improve resource values such as:

- fish habitat;
- wildlife habitat;
- scenic areas or other recreation or tourism resources and establishments;
- special features such as cultural, historic, biological or earth science sites.

2. DISCUSSION

Modified management areas are areas of land surrounding specific facilities, activity areas, or resource features, wherein certain resource management activities or land uses are either prohibited or constrained to ensure that objectives for adjacent facilities are not impaired.

Modified management areas will normally be managed by a two zone concept, particularly along shorelands, where the inner zone is one of minimal disturbance and the outer zone is an area of more general use where certain aspects of management are carefully monitored.

They have the dual advantage of enhancing the quality of recreation and tourism in areas where resource extraction is occurring and of allowing

resource extraction to be an accepted use in areas identified primarily for recreation and other uses.

Modified management areas placed along major transportation and access routes, on recreation lakes and waterways and on some of the major trails, contribute to the maintenance of the recreation landscape.

Modified management areas ensure unhindered passage on recreation trail systems; a variety of habitat conditions and, therefore, the opportunity for greater wildlife variety; and protection for fisheries by maintaining shade, and by minimizing siltation and nutrient enrichment of streams and lakes with significant fisheries values. Furbearers are also protected by the retention of cover along the shorelines of waterbodies.

Public opposition in the past has prevented or severely hindered mineral exploration and the management and extraction of natural resources. Modified management areas contribute in a positive way to softening conflicts between land uses, thereby ensuring continued opportunities for resource management.

As the name implies, modified management areas are not 'no use zones' where all land uses or activities are prohibited. Instead, the prime purpose or intent of a modified management area is to provide for the diminishing effects of one conflicting land use with another.

The exact nature of modified management areas and their size will vary related to site conditions, the features or resource being protected, and the activity from which it is separated.

Along all shorelands, a 120 metre (400 feet) modified management area[1] will normally be provided or encouraged. The extent of the two zones along shorelines will vary with local conditions such as topography,[2] soils and the nature of resource values being protected.

Along provincially and municipally maintained roads, and along ministry access roads with existing or potential for significant recreational use, a 120 metre (400 feet) modified management area may be provided or encouraged where appropriate.[3]

Along permanent or designated trails and portages, a 35 metre (115 feet) modified management area may be provided and encouraged where necessary.

Modified management areas will also be provided or encouraged for areas or sites which clearly contribute to achievement of ministry targets and which may require some measure of protection if targets are to be achieved. Examples include habitat of endangered species and deer wintering areas.[4]

Modified management areas may be provided for special features such as natural, cultural, and historical sites, and other resources of public interest which are not specifically related to program targets.[5] They may also be provided around recreation or tourism resources or establishments.

It is recognized that there may be many cases along roads and trails or adjacent to important resources where modified management areas are neither necessary nor desirable. There may be other instances where it is necessary to exceed the extent of modified management areas identified above in the establishment of either the inner or outer zone.

There is flexibility to develop modified management areas according to site conditions and to the values being protected. Ultimately, each situation will be judged on its own merits.

3. PROGRAM STRATEGY

For all modified management areas the following will apply:

(1) Measured on the ground from the treed edge adjacent to the shore.

(2) For instance, the width of the mininal disturbance zone along shorelands should vary with slope as follows:

Shore Slope in Percent	*Width of Minimal Disturbance Zone*
0	*15m (50 feet)*
10	*30m (100 feet)*
20	*40m (130 feet)*
30	*50m (165 feet)*
40	*60m (200 feet)*

(3) Setbacks are measured from the edge of the road right-of-way.

(4) Emphasis for the protection of these areas is also provided in general resource areas.

(5) Emphasis for the protection of these areas is also provided under areas of special interest in Algonquin Park.

- management prescriptions will be developed and will be available for public review. For forest management activities, such prescriptions will be identified in operating plans, annual plans, and conditions stipulated in licences and cutting approvals;
- a set of guidelines for road construction will be attached to all work permits related to shoreland areas, with special reference to stream crossings;
- where the two zones are set out, the standards for management normally will be:

Minimum Disturbance Zone

- timber extraction and the construction of roads normally will not be permitted. However, in special circumstances, consideration may be given to discrete removal of selected individual trees, or the carrying out of specific management to maintain stand vigour associated with modified management area objectives, such as cover maintenance and recreation aesthetics. The accumulation of slash, skid trails and roads and the operation of mechanized equipment normally will be prohibited.
- the extraction of aggregate within this zone normally will not be permitted. However, in circumstances of critical supply, a gravel pit may be opened up to within 30 metres (100 feet) of a waterbody and 30 metres (100 feet) of a municipal or provinicial roadway for a short time under strict site plan control, including rehabilitation suited to the site;
- management efforts in this zone will be directed toward ensuring that mineral exploration activity takes place in accordance with the general intent and purpose of the zone. In this regard, a public information program will be initiated, and special guidelines will be developed for use by the mining industry;
- mine development on the surface, except for certain support functions, will generally not be permitted within 120 metres (400 feet) of waterbodies, or 90 metres (300 feet) of provincial highways. Accordingly, surface rights will not be granted in mining leases within such areas.

General Use Zone

- within the general use zone, management will require use of techniques which are more sensitive to adjacent land uses than standard levels of resource management. This zone will only be used where silvicultural systems can be developed that permit resource extraction, while clearly achieving the objective of resource protection.

D: resource access

Access is provided to the resources of the district by the construction of roads on Crown lands and by providing and maintaining access points.

1. MINISTRY ACCESS ROAD CONSTRUCTION ON PUBLIC LAND

Access roads will be developed and maintained to stimulate development and use of Ontario's natural resources, taking into account tourism requirements for isolation, the needs of the mining and forest industries, outdoor recreation opportunities for the residents of Ontario and other general public, commercial and industrial transportation uses.

Access roads are essential for resource management and extraction. To meet resource production targets, new access roads must be developed in areas which are remote or are at present, poorly serviced by roads.

Restrictions on location, construction and maintenance of access roads and on public access may be necessary to provide remote recreation and tourism or to produce specific resources from overuse.

Road construction and maintenance will therefore be guided by the following provincial standards:

- access roads will be developed and maintained consistent with approved ministry land use guidelines, resource management plans, and operating guidelines. To ensure overall co-ordination, multi-year plans for road access will be prepared for the province, the region, and the districts;
- access road plans will be developed on a long term basis and will be subject to public consultation;
- plans will take into account the requirement (if any) for public access;
- roads will be classified as permanent or temporary based on intended use;
- temporary roads will be rendered inoperative when intended uses are fulfilled;
- access roads may be closed temporarily or seasonally to the public for resource management and/or public safety reasons; and
- alignment of roads will be planned:
  - to avoid lake access where appropriate;
  - to provide controlled access; or
  - to provide public access.

In addition, the district will:

- ensure that roads are not constructed within shoreline modified management areas, except where it can be demonstrated that alternative alignments do not exist;
- ensure that roads required for resource extraction, which have been permitted in a candidate park, are consistent in terms of type and location with the long-term objective of the park;
- ensure that the costs and responsibility of maintenance of roads constructed on Crown land by the public or by private companies, are borne by the proponent;
- ensure that all roads constructed on Crown land will be open to the public, unless specifically closed by the District Manager;
- ensure that the location of all proposed forest access roads are included within timber management or operating plans;
- ensure that all proposals for roads on Crown land are approved prior to construction;
- encourage full use of trees removed from rights-of-way;
- discourage the disposal of Crown lands for road locations, except to municipalities or other government agencies;
- require applicants for road construction over Crown land to:
  - pay for all costs of planning, construction and maintenance;
  - construct the road in the location, and to the standards established by the ministry;
  - obtain a quarry permit for the use of any aggregate on Crown land;
  - recognize that, as a public road, the facility may be used by various users including loggers and recreationists; and
- where applicable, and in order to avoid any possible conflict among users, encourage filing of an application for construction by an organization (e.g. cottager's association) rather than by individuals.

To implement these policies, the district will establish a formal road committee which will:

- review, assess and approve all road development proposals and closures;
- ensure that all proposals to construct new roads, upgrade or close existing roads, either by the ministry, outside agencies or the public, be circulated to all programs for review;
- prescribe special road construction and maintenance standards to protect identified program interests and ensure that these standards are being followed; and
- review the existing road network on a regular basis to:
  - ensure that appropriate road construction materials are used in the construction of all major access roads;
  - identify incompatible uses of roads;
  - establish standard guidelines to assist in dealing with various concerns such as location, road type, construction details, closure, and upgrading and the mitigation of environmental impacts; and
  - develop a district roads plan to enable a thorough review of existing roads and all implications of constructing proposed roads.

2. ACCESS POINTS

Currently ten access points to water are managed. The district will:

- continue to manage existing access points;
- improve the identification of access points by better signage of ministry maintained sites and by preparing up-to-date maps of access points managed by other provincial or federal agencies, municipalities, or the private sector; and
- identify areas where access should be improved in accordance with ministry requirements and seek ways to provide access where required.

E: general resource areas

The *Pembroke District Land Use Guidelines* identify how the ministry may use public lands, and influence the use of private land.

The district has been divided into thirteen general resource areas in an effort to provide direction to management efforts, to achieve the objectives and targets of each program as outlined in this document. This discussion clearly recognizes:

- the unique sensitivity of some sites (deer yards, spawning areas); and
- that areas may shift over time, freeing some areas from special management requirements, but leading to the establishment of the wide range of special management requirements associated with various resource concerns.

These areas are shown on Map 9 (back pocket). The special policies for each area which follow provide guidance for the management activities which could take place.

General resource areas have been designated without regard for land ownership. On Crown land, the management prescription for the area indicates the action which may be practiced by the ministry. On private land, the management prescription for the area indicates the actions which the ministry wishes to encourage in support of its objectives for resource management.

1. AREA A—MULTIPLE NATURAL RESOURCE USE

a. Description

This is the largest management area and occurs throughout the district.

b. Intent

Within this area, resource management will be directed to multiple use management. Standard management practices combined with the concept of sequential use will enable the ministry to take full advantage of the potential of the natural resource.

c. Management Strategy

- ensure ministry activities within this area take place in accordance with the general policies and program policies identified in the preceding sections of this document;
- undertake outdoor recreational and land management activities and encourage the utilization of timber, mineral, aggregate and fur resources according to accepted resource management techniques; and
- where the ministry advocates resource management on private land, give appropriate consideration to the impact upon adjacent land uses.

2. AREA B—PROVINCIAL PARKS

a. Description

Consists of four existing provincial parks: Bonnechere Park (including the Round Lake Park Reserve expansion area) in the Township of Richards; Driftwood Park in the Township of Head; Carson Lake Park in the Townships of Sherwood and Jones; and Matawatchan Nature Reserve Park in the Township of Matawatchan.

b. Intent

To manage these facilities as appropriate, to meet provincial park objectives in accordance with provincial park planning and management policies.

c. Management Strategy

- manage these areas for park purposes in accordance with master plans when approved;
- assess the appropriateness of retaining Carson Lake as a provincial park; and
- examine through further study, the appropriateness of retaining Matawatchan as a Nature Reserve.

3. AREA C—CANDIDATE PROVINCIAL PARKS

a. Description

Consists of six candidate parks which can contribute to the achievement of the objectives of the provincial parks system. These areas include the

Centennial Lake Park Reserve in the Township of Brougham, Bell Bay in the Township of Jones, Westmeath in the Township of Westmeath, the Ottawa River in the Townships of Westmeath and Ross, and the Lower Madawaska River in the Townships of Radcliffe, Raglan, Lyndoch and Griffith.

b. Intent
To manage and to encourage the management of these properties to protect park values.

c. Management Strategy
- ensure that all management activities undertaken on Crown lands within these areas are compatible with the protection of the potential park values;
- attempt to influence the use of private lands in these areas, such that park values are protected;
- prepare interim management guidelines for the Centennial Lake Park Reserve, the Bell Bay, and Bonnechere and Ottawa River candidates in order to determine the necessity of acquiring private land; viable alternatives to fee-simple acquisition; the economic impact of establishing a park on the local area; and activities and uses which will be displaced and means whereby associated impacts can be minimized;
- ensure the compatibility of both Crown land resource management activities and private land development with long-term park objectives;
- recommend that hunting continue to be permitted in the Westmeath, Bonnechere River and Lower Madawaska River when these areas are established as provincial parks. Master planning will provide for and enhance public waterfowl hunting opportunities in the Westmeath candidate; and
- recommend that commercial tourism continue to be permitted if the Rocher-Fendu channel of the Ottawa River is made a provincial park. Specific resource uses, however, could require examination should the area be brought into regulation.

4. AREA D—AREAS OF NATURAL AND SCIENTIFIC INTEREST

a. Description
Consists of twelve areas outside of the provincial park system with earth and life science features having values related to public education and research. Four of these areas are highly significant; the remaining sites are important from a local perspective.

b. Intent
Where appropriate, the district will advocate protection of these sites.

c. Management Strategy
- Bonnechere Caves—Township of Wilberforce.
  These are the finest karst caves in Ontario and are, therefore, highly significant. The caves occur in Middle Ordovician limestone. The district will attempt to encourage compatible uses of this feature through agreement with the private owner.
- Pretty's Hill—Township of Westmeath.
  This site has the best representation of a large number of features related to the Champlain Sea within the Algonquin Region. As such, it is highly significant. Features include part of an ice marginal delta; a marine spit; a storm berm; raised beaches and wave cut terraces; and fossil sites. The district will attempt to provide appropriate protection of these features through the municipal planning process and agreements with willing landowners if necessary.
- Petawawa Fish Hatchery—Township of Petawawa.
  This site consists of a portion of the 25 metre (80 foot) terrace which runs along the Ottawa River between Petawawa and MacGregor's Bay. The structure of the terrace provides a chronology of the inundation of the Ottawa Valley by the Champlain Sea and the subsequent withdrawal of the sea. The district will protect that portion of the terrace within the Hatchery property through a management plan for this property. The importance and history of the terrace will be part of the visitor services component of the management plan.
- Shaw Woods—Township of Wilberforce.
  The Shaw forest site consists of significant forest vegetation stands representative of the Upper Ottawa Valley. The site also contains a melt-water channel which once drained glacial Lake Dore. The district will encourage the continuance of the agreements between the landowners and the Nature Conservancy of Canada to manage this area.

The ministry will encourage landowners and municipalities to protect the following features:
- Davis Mills Site—Township of Alice.
  This site consists of a thick sequence of Champlain Sea marine clays exposed along the river bank of the Indian River.
- Green Lake Esker Bog—Township of Wilberforce.
  This feature consists of a number of classic esker ridges which cross a bog near the hamlet of Green Lake.
- LaPasse Pipeholes—Township of Westmeath.
  The pipeholes were formed as a result of the seepage of ground water between two layers of marine clays.

- Lochwinnoch Landslide—Township of Horton.
  This is a small but classic example of rotational failure in sensitive marine clays.
- Madawaska Extension Area—Townships of Raglan, Lyndoch and Griffith.
  A group of features are found in this area. They include: a dune field, relict gravel bars, unoxidized basal fill, melt-water channels, and classic esker ridges.
- McGrath Melt-water Channel—Township of Grattan.
  This site consists of several flat bottomed valleys cut in glacial till by glacial melt-waters.
- Mink Lake Moraine—Township of Grattan.
  This site consists of one of a number of small end moraines located in the vicinity of Mink Lake.
- Rapides Paquette—Township of Westmeath.
  This site consists of a number of sink holes in a small outcropping of Middle Ordovician limestone.

---

5. AREA E—TRAILS, CANOE ROUTES, ACCESS POINTS

a. Description

Consists of winter and summer trails, canoe routes, and access points, all of which contribute to the general recreation objectives.

b. Intent

To manage and encourage the management of these areas as general recreation facilities.

c. Management Strategy

- to be retained for general recreation purposes in accordance with integrated resource management strategies and general recreation strategies, and
- all management activities within these areas will enhance the retention of aesthetic values and a high level of water quality.

---

6. AREA F—DEER YARDS

a. Description

Areas containing suitable conifer cover and sources of winter feed that have traditionally supported deer populations throughout the winter season. These areas are located within Petawawa, Hagarty, North Algona, Richards, Raglan, Lyndoch, Griffith, Matawatchan, Brougham, Blithfield, Bagot, Grattan and Wilberforce Townships.

b. Intent

The district will attempt to ensure that these areas are maintained as wintering areas for deer.

c. Management Strategy

- The district will manage winter deer yards for the purpose of providing habitat conditions suitable for the survival of deer;
- All management activities to be undertaken on Crown lands within these areas must be compatible with the habitat requirements of wintering deer;
- The district will encourage the management of deer yards on private land consistent with the requirements of the winter deer population;
- No further disposition of Crown rights will occur, except for mineral rights as provided for in Section C, page 15; and
- The district recognizes that deer yards shift over time, and that management prescriptions designed to maintain winter range requirements of deer may have to be applied to areas presently beyond the designated yarding areas.

---

7. AREA G—WETLANDS

a. Description

Consists of wetland areas located throughout the planning area, all of which are necessary for the achievement of the objectives of the fish and wildlife, and parks and general recreation programs in Pembroke District. These areas contain complex and delicate ecosystems consisting of some important plant species, such as wild rice. These areas are also recognized as important habitats for waterfowl, warm water fish and furbearers.

b. Intent

To maintain or encourage maintenance of all significant wetland areas within the planning area.

c. Management Strategy

- All management activities will be undertaken in such a manner as to minimize possible impacts on these areas; and
- The district will attempt to influence the use of private lands in these areas, such that development is compatible with wildlife management.

---

8. AREA H—NESTING SITES

a. Description

Consists of known heronries, Peregrine Falcon, Bald Eagle, and Kirtland's Warbler nesting sites.

b. Intent/Management Strategy

- The district will ensure the protection of nesting areas of protected species in all management activities to be conducted on these sites, and will attempt to protect all known nesting sites of protected species on private lands; and
- The district will manage Crown land, and

attempt to influence the use of private lands, so as to minimize the possible impact on important nesting sites of unregulated species.

9. AREA I—COLD WATER FISHERIES HABITAT

a. Description
Lakes and streams with physical, biological and chemical characteristics which enable the survival of cold water fish species, including brook and lake trout, that are located throughout the district.

b. Intent/Management Strategy
- The district will attempt to maintain all existing cold water fish habitats;
- All management activities will be undertaken in such a manner as to minimize habitat degradation of cold water streams and lakes; and
- The district will attempt to influence the use of private land in these areas through the municipal planning process so as to minimize impacts.

10. AREA J—SPAWNING AREAS

a. Description
Known locations where desirable fish species[1] traditionally and successfully spawn, located throughout the district.

b. Intent/Management Strategy
- The district will attempt to protect and maintain all known desirable species spawning areas;
- All management activities will be undertaken in a manner that will minimize disturbance to spawning areas; and
- The district will attempt to influence the use of private lands in these areas through the municipal planning process so as to minimize disturbance.

11. AREA K—SEED ORCHARDS AND FOREST RESEARCH PLOTS

a. Description
These areas contain seed orchards or forest research plots established by the ministry to generate knowledge, and to develop techniques and materials in the field of forest biology and management to ensure effective forest management.

b. Intent/Management Strategy
- The district will retain these areas as seed orchards or research plots; and will ensure that all management activities in these areas are consistent with continuing forest research requirements.

12. AREA L—INTENSIVE FOREST MANAGEMENT AREAS

a. Description
These areas are intensive forest management areas consisting of a combination of natural forest areas and plantations serviced by a well maintained road system.

b. Intent/Management Strategy
- The district will retain these areas as intensive forest management areas except for the Green Lake project area;
- Uses within the Green Lake project area affected by the proposed Lower Madawaska candidate provincial park will be established in the master planning process; and
- Where these areas overlap with deer yards, forest management practices will be consistent with deer habitat requirements.

13. AREA M—FIRE RISK ZONES

a. Description
Consists of areas which contain values to be protected (e.g. residential property, Indian reservations, provincial parks and candidate provincial parks, conservation areas, federal land, landscape features, sensitive lakes and streams, timber resources); areas having a fire occurrence history and areas having high potential for fire spread.

b. Intent/Management Strategy
The district will identify these areas as high priority areas in its fire management planning, and will ensure that management activities occurring within these areas do not increase fire risk.

(1) Desirable species include all trout species, large and smallmouth bass, pickerel, maskinonge (muskie), and pike.

1. GENERAL

Through intensive management, emphasis on extension assistance, and public information programs, the district will be able to achieve the ministry targets in Pembroke District. This requires, however, that all program activities be carried out in a manner which addresses the intent of these *Land Use Guidelines.*

The responsibility for and the means to apply these *Land Use Guidelines* are identified throughout tnis document. To summarize, ministry objectives will be achieved in Pembroke District through:

- ministry program activities;
- extension and assistance programs for private land;
- input to, and review of, municipal official plans and zoning by-laws and review of specific development proposals;
- adoption of a planning and project approval procedure outlined below;
- resource inventory on both public and private land;
- regular public consultation;
- specific conditions, (e.g. road and modified management area guidelines), incorporated in permits, licences, leases, easements, etc., issued under provincial legislation, (e.g. the *Public Lands Act, Mining Act, Crown Timber Act)*; and
- liaison and cooperation with other government ministries and agencies, such as the Ministries of the Environment, Transportation and Communications, Tourism and Recreation, Municipal Affairs and Housing, conservation authorities, and Agriculture and Food.

Management and operational plans are prepared to identify activities to be undertaken by the ministry or its agents. These provide more specific direction for management and use of land and resources. Such plans will have due regard for the intent of this document. Existing management and operation plans which do not address the intent of these *Land Use Guidelines* will be appropriately amended.

As achievement of ministry objectives is dependent upon the resources on private land, major efforts will be made to influence the use of these lands. This will be done through the provision of advice and assistance to private landowners regarding resource management, through achievement of formal agreements and arrangements for ministry management of private lands, and through ministry submissions to municipalities in the preparation of long-range land use plans, review of these plans, and private sector development proposals.

The ministry will specifically encourage municipalities to appropriately treat areas necessary to achieve ministry targets in their planning process. Such resources include high capability tolerant hardwood and pine forests, important aggregate and critical resource areas.

In this regard, the general resource area map may be used as a source of information to generally identify areas of ministry concern. However, ministry submissions to plans of other agencies or municipalities and reviews of development proposals will be based upon detailed background or management information.

Furthermore, the ministry will circulate its management plans to affected municipalities, landowners and other provincial agencies to improve understanding and cooperation in the management of natural resources.

Additionally, on all lands, the ministry will promote the wise use and management of all resources in accordance with the provisions and general spirit and intent of these *Land Use Guidelines.*

Within the planning area, a number of existing uses on Crown land may not be consistent with the overall management direction and intent of this document. It may be necessary to stop certain activities immediately in order to protect critical resources. However, where resources are not jeopardized, incompatible activities may be phased

out over time as these *Land Use Guidelines* are implemented.

2. CONSISTENCY WITH OTHER AGENCY PLANS

a. General Status of *Land Use Guidelines*
The *Land Use Guidelines* have no legal status. The control of land use on private land in municipalities is exercised by those municipalities and the Minister of Municipal Affairs and Housing under the authority of the *Planning Act*.

The ministry recognizes that private landowners, other government agencies, municipalities, conservation authorities and interest groups are key partners in any effort to achieve effective and integrated resource management. The Ministry of Natural Resources will continue to work with these groups, especially with municipalities through the ministry's plan input and review program to ensure that resource values are considered in local planning documents.

b. Relationship with Municipalities
The *Pembroke District Land Use Guidelines* will serve as one of the sources of information for ministry involvement in municipal planning.

The ministry will consult with municipal officials and private landowners where the *Land Use Guidelines* indicate the ministry wishes to influence particular land uses on private land in organized municipalities. At this time the need of other land users will be taken into consideration.

There will be occasions when the ministry feels that certain land uses or proposed developments on private land, while in conformity with municipal planning documents, will have a negative impact on ministry programs or interests such as critical winter deer yards. In such situations the ministry will attempt to resolve the situation through discussions with the proponent, the municipality and the Ministry of Municipal Affairs and Housing.

In municipalities containing Crown land there may be situations where municipal planning documents do not permit land uses on Crown land indicated as preferred in the *Land Use Guidelines*. Where this happens, and it appears that a possible land use conflict might arise, the ministry will consider taking further action under procedures provided for under the *Planning Act*.

c. Conservation Authorities
Conservation authorities are independent corporate agencies set up jointly, under the *Conservation Authorities Act*, by the local municipalities and the Province of Ontario to develop and implement water-related land management programs.

The *Conservation Authorities Act* is administered on behalf of the Province of Ontario by the Ministry of Natural Resources.

The Mississippi Valley Conservation Authority is involved in watershed management activities in a small area of Blithfield Township in the south portion of the planning area.

Conservation authorities are presently completing watershed plans that will outline the long-term direction of all authority programs. The primary program of conservation authorities in flood and erosion control complements the ministry's programs. Other conservation authority programs, particularly those in forestry, fish, wildlife and recreation supplement the efforts of the ministry. Both agencies are making every effort to reduce duplication and overlap in their planning and ensure that the delivery of resource management programs achieves the greatest possible benefits to the people of Ontario.

d. Ontario Ministry of Agriculture and Food
The ministry recognizes the importance of agriculture. On private land, the ministry normally will not encourage or support activities or land uses which result in long-term loss of the amount of land in agricultural production. The ministry will encourage forestry, recreation and other compatible uses on high capability land presently not in agricultural production.

Generally, on public land the ministry will maintain high capability agricultural land (or other sites as identified by the Ministry of Agriculture and Food) in uses which do not preclude the long-term use of these lands for agriculture—should agricultural use become necessary or desirable.

e. Ontario Ministry of the Environment
The Ministry of Natural Resources will work closely with the Ministry of the Environment in meeting the requirements of the *Environmental Assessment Act* and will work closely with that ministry in monitoring impacts on the environment related to natural resources.

The two ministries have jointly developed guidelines, in this regard, related to water quality and fisheries issues.

The Ministry of Natural Resources has responsibility for identifying the fisheries values of a waterbody with respect to meeting the Ontario government's fisheries mandate. This identifica-

tion is based on the *Land Use Guidelines* and, as developed, local fisheries management plans. The Ministry of the Environment is responsible for determining existing water quality and predicting the effects of proposed development on water quality. The latter information is used by the two ministries to assess potential effects on fisheries values.

f. Ontario Ministry of Citizenship and Culture
The ministry recognizes the importance of sites of historical or cultural significance. The ministry will work with the Ministry of Citizenship and Culture to identify known sites and to establish appropriate management prescriptions.

g. Ontario Ministry of Tourism and Recreation
The ministry recognizes the significant contribution of recreational and tourism pursuits to the social well-being of residents of the province. In fact, part of this ministry's outdoor recreation objective is to ensure a continuous contribution to our economy from tourism and to maintain the significant recreational values of the area.

The ministry will cooperate with and assist the Ministry of Tourism and Recreation and the tourist industry in encouraging tourism development where appropriate.

APPENDIX

A: highlights of the ministry's public consultation program

An important aspect of the land use planning process is public consultation. The Pembroke District has been involved in public consultation in its land use planning process for the past two years. This has included the circulation of strategy documents to all interested individuals and groups and the presentation of information at a number of open houses.

Initial background meetings, informing the public of the district planning program and requesting comment on the accuracy of the ministry's information were held in June and August of 1980. Attendance of these open houses was small and few comments were received. As a result, changes in the background information were minimal. The drafting of a *Land Use Strategy* was subsequently undertaken.

The public consultation process for the draft *Land Use Strategy* for Pembroke District was initiated in July, 1982, with the distribution of a tabloid to every household in Renfrew County. The purpose of this tabloid was three-fold: to provide the public with a summary of the document; to inform them of the second series of public open houses; and to invite comments.

The second series of open houses involved three public open houses, three open houses for invited municipal representatives, and one open house for ministry staff. Advertisement for these public open houses were placed in locally distributed daily and weekly newspapers and local interest groups were invited by letter.

As a result of these open houses, many verbal and written comments were received, and additional meetings were held with interest groups. Table A1 summarizes the means of public contact.

Eighty-one responses to the draft *Land Use Strategy* were received. A summary of responses received up to November 1, 1982, are listed in Table A2.

Based on the analysis and evaluation of all the public input received, the proposed *Land Use Guidelines* were prepared. The Minister personally reviewed the district summary and analysis of public comment and discussed the proposed *Land Use Guidelines* with the District Manager. Based on these discussions together with information and further input received at several public forums held throughout the province, the Minister provided final instructions as to the preparation of this document.

Copies of all comments received, together with the district summary documents are available for review at the Pembroke District office and the ministry's main office reading room and Legislative Library at Queen's Park.

TABLE A1 SUMMARY OF CONTACTS (to November 1, 1982)

Number of Background Information Open Houses — Pembroke September 6, 1980 — Dacre September 13, 1980	2
Background Open House Attendance	30
Number of Draft Strategy Open Houses	7
Draft Strategy Open House Attendance — Total 366	
— Pembroke staff	60
— Pembroke municipalities	5
— Pembroke general public	160
— Barry's Bay municipalities	12
— Barry's Bay general public	65
— Renfrew municipalities	9
— Renfrew general public	50
Comment Sheets Distributed	100
Draft Strategies Distributed	200
— by mail	150
— open houses	
Telephone Calls Received	5
Meetings with Municipalities — Planning Board, Renfrew County — September 22, 1982 (plus 3 open houses)	1
Meetings with Interest Groups — Murray Bros. Lumber Company Ltd. — September 2, 1982	1
Interviews with Media	2
— television	3
— radio	3
— newspaper	

TABLE A2 SUMMARY OF RESPONSES (to November 1, 1982)

Response Documentation / Category of Respondent	Individual	Government Agency	Municipal	Interest Group	Industry (Company or Association)	Category Unknown (Anonymous)	All Categories (total)
Background Open House Comment Sheet							
Background Open House Record of Conversation							
Draft Strategy Open House Comment Sheet	28	—	2	1	2		33
Draft Strategy Open House Record of Conversation	1	—	—	—	—		1
Mailed Comment Sheet							
Letter/Brief	29	4	—	8	4	1	46
Record of Conversation	1	—	—	—	—	—	1
Total	59	4	2	9	6	1	81

Backcountry Recreation
This includes canoe tripping and backpacking in remote areas, accessible only on foot, or by manually powered water craft.

Candidate Provincial Park
An area designated in ministry *Land Use Guidelines* which may be given official status as a park at some future date.

Canopy
The cover of branches and foliage formed by tree crowns.

Capability
The natural ability of an area to provide continuous opportunity for benefits under an assumed level of management.

Capacity
The upper limit to which an area of land, or water, may be used or developed without an undesirable change taking place in the environment. Also called carrying capacity.

Cold Water Habitat
Waterbodies having characteristics that support cold water fish species such as trout, whitefish, cisco.

Crown Land
All land (including land under water) held by the province. The term refers to both land which has never been sold and land which has been reacquired. In this report, public land and Crown land are used synonymously.

Deer Yard
An area having available shelter and food, in which deer are usually found during the winter.

Earth Science Site
Public or private land where landforms of provincial interest have been identified.

Environment
All of the natural and man-made systems, conditions and commodities of a planning area.

Furbearers
Animals having commercially valuable pelts including beaver, mink, otter, lynx, muskrat, fisher, marten, fox, raccoon, and wolf.

Goal
A general purpose to which the ministry aspires.

Habitat
The place or type of site where an animal or plant naturally or normally lives.

Hazard Land
Lands which because of their physical characteristics, in combination with their location, present a risk for their occupants including loss of life, property damage, and social disruption (e.g. flooding).

Historical Theme Segment
A theme segment represents an important phase of a distinctive activity which took place at a specific time and place within Ontario.

Integrated Resource Management
The coordination of resource management programs to ensure that conflicts are minimized and that management which would benefit several programs is encouraged. Integrated management encourages multiple use, but recognizes that in some circumstances management of areas for a single purpose may be necessary.

Intolerant Hardwood
Includes the following tree species: poplar and white birch. The term "intolerant" refers to the sensitivity of these species to shade.

Land Use Guidelines
A document which displays direction concerning the use of land and water in a defined area. It identifies where and how the ministry intends to achieve its objectives in a specific district through the use of Crown land and through influencing the use of private land.

Land Use Planning
A process which culminates in a direction regarding the use of land.

Licence of Occupation
A licence giving permission to use and occupy public land for a specific purpose.

Life Science Site
Public or private land where natural habitats of provincial significance have been identified.

Littoral Zone
The relatively shallow area of a lake normally adjacent to the shore that supports the growth of aquatic vegetation.

Management
The judicious use of means to achieve ends. Management may have various levels of intensity.

Management Plan
A detailed plan identifying how a resource is to be managed consisting of specific direction for achievement of policies, targets, and objectives.

Mineral Aggregate
Refers to sand, gravel and stone.

Mining Rights
The right to work the ores and minerals on or under any land. These may be granted separately from surface rights.

Multiple Use
A resource management or planning concept applied to very large areas to indicate that all basic uses are accommodated. Typically, two or more uses may occur on the same general area at the same time or in sequence.

Natural Environment Park
An area incorporating outstanding recreational landscapes with representative natural features and historical resources to provide high quality recreational and educational experiences.

Nature Reserve
An area selected to represent the distinctive natural habitats and landforms of the province, and are protected for educational and research purposes to benefit present and future generations.

Net Merchantable Timber
The volume of wood remaining in a tree after deductions are made for tops, stumps and defect.

Objective
A quantifiable and attainable end which the ministry's efforts are intended to accomplish.

Occasion
A measure of actual recreational use describing the number of times a recreation resource or facility is used by individuals in a given time period. An occasion is considered not to exceed one day in duration.

Operational Plan
A part of the resource management plan stating the extent (including human and financial resources) of all work of any nature to be carried out during one or more years of the management period.

Opportunity
A measure of recreation supply which is used to describe the number of times a resource or facility can be used (occasions of use) in a given time period. An opportunity is considered not to be greater than one day.

Policy
A decision concerning the objectives to be achieved and the means of achieving them.

Production Forest Land
An area dedicated to the growing of merchantable timber or the production of other forest products.

Productive Forest Land
Land bearing or capable of bearing timber of merchantable character and not withdrawn from such use.

Public Land
Any land owned or administered by a public body or agency. It includes federal, provincial, and municipally-owned lands and lands held by agencies such as parks commissions and conservation authorities.

Recreation Park
An area which supports a wide variety of outdoor recreation opportunities for large numbers of people in attractive surroundings.

Resource
Any commodity that meets a need.

Resource Management
The control and coordination of the use of resources to achieve specific ends. Commonly applies in particular to natural resources.

Resource Management Plan
A plan by which the policies, objectives, and targets (usually of an individual program, except in the case of an integrated resource management plan) are implemented for a specific resource.

Saw Log
A log considered suitable in size and quality for producing sawn lumber.

Selection Harvest
The removal of mature trees, either as scattered individuals or in small groups, at relatively short intervals and repeated indefinitely. The objective is representation of all age-classes distributed throughout the stand.

Sequential Use
Where one use is followed by another in planned sequence (e.g. gravel extraction followed by residential development).

Shelterwood Cut
The removal of mature trees in a series of two or more cuts for the purpose of obtaining natural regeneration under the shelter of the trees that are left.

Short Log
A short length of sawn timber generally less than 1.8 metres (6 feet) long.

Site Class
A measure of relative productive capacity of a site for timber production.

Site District
A fairly large subdivision of a site region based on a characteristic pattern of climate and land-form features.

Site Region
An area of land within which the response of vegetation to the features of landform follow a consistent pattern. Each specific type of land (defined in terms of relief, soil, texture, depth and drainage) within a specific site region has its characteristic plant succession.

Staking
Claiming a title or right to a parcel of Crown land by placing posts identifying a parcel of land for pursuing mineral exploration to satisfy the legal requirements of the *Mining Act*.

Strategy
Planned actions or measures to achieve a desired end.

Surface Rights
All rights in land, other than the mining rights, including sand and gravel deposits.

Sustainable Yield
The number of animals that can be harvested annually without affecting the basic population.

Target
A quantified end to be achieved or completed by a specific date.

Tolerant Hardwood
Includes the following tree species: sugar maple, beech, yellow birch, basswood, red oak and white ash. The term "tolerant" refers to the ability of these species to tolerate moderate levels of shade.

Veneer Log
A log considered suitable in size and quality for producing veneer (a thin sheet of wood of uniform thickness).

Warm Water Habitat
Waterbodies having characteristics that support warm water fish species such as yellow perch, pike, rock and smallmouth bass.

Waterway Park
An area of outstanding recreational water routes with representative natural features and historical resources to provide high quality recreational and educational experiences.

Wetlands
Lands which are permanently or seasonally covered with shallow water and where distinctive soil conditions, plant and wildlife communities develop. These include wetland forests (swamps), wetland thickets, marshes, bogs and fens.

Wilderness Park
A substantial area where the forces of nature are permitted to function freely, and where visitors travel by non-mechanized means and experience solitude, challenge, and personal integration with nature.

Working Group
Tree stands having the same predominant species, and managed under the same rotation and broad silvicultural system.

Work Plan
A plan prepared annually which defines what management activities are to be undertaken for that year.

Yarding Area
See deer yards.

MAP 9

PEMBROKE DISTRICT
GENERAL RESOURCE AREAS

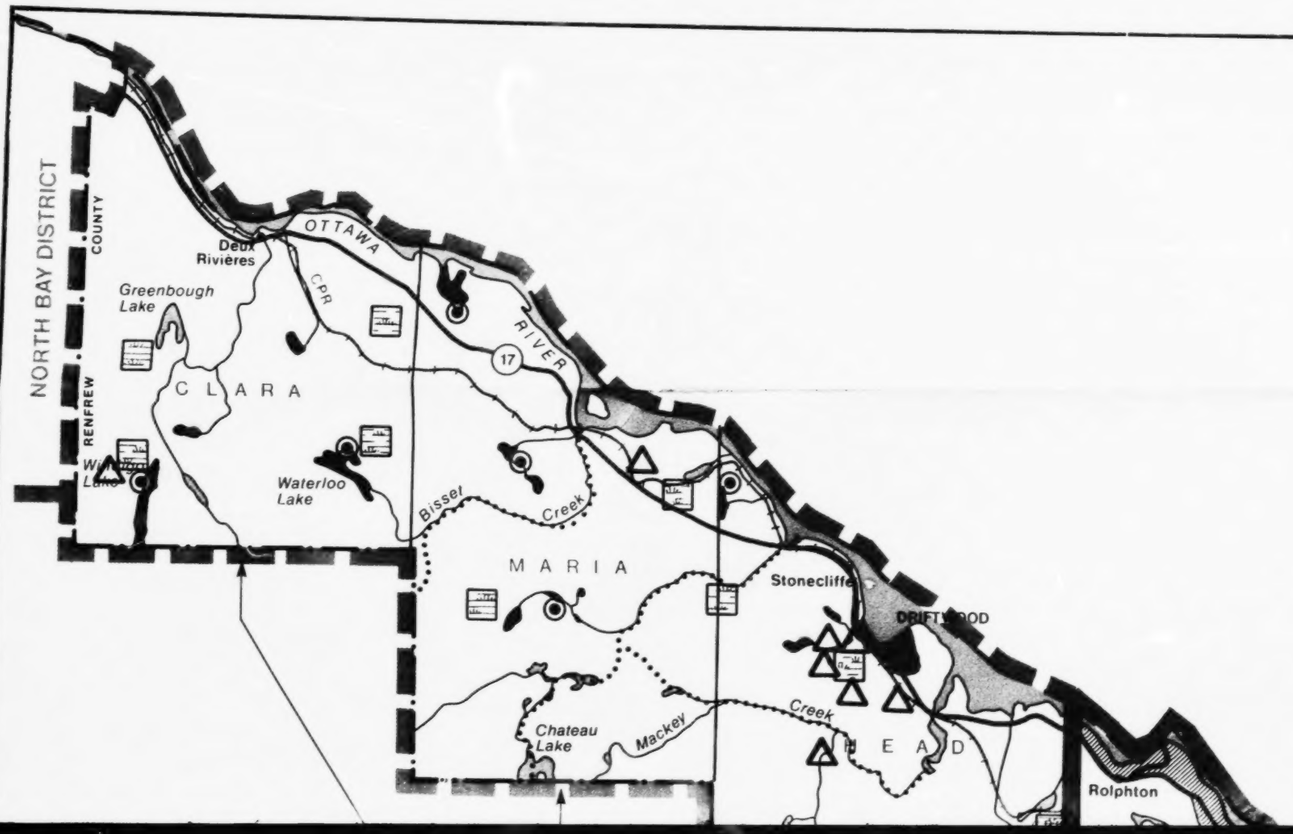
5 0 5 10 15 20 Kilometres

5 0 5 10 15 Miles

1:250000

N

M.N.R. Administrative District
Area included for District Planni
Province
County
City, Town, Village, Township
Community
Indian Reserve
Provincial Park
Air Base
Provincial Highways
Railways



GENERAL RESOURCE ARE

A MULTIPLE RESOURCE MANAGEMENT

B EXISTING PROVINCIAL PARK

C CANDIDATE PROVINCIAL PARK

D AREAS OF NATURAL & SCIENTIFIC INTEREST:
- LIFE SCIENCE FEATURE
- EARTH SCIENCE FEATURE

E
- MNR SNOWMOBILE TRAIL
- MNR CROSS-COUNTRY SKI TRAIL
- CANOE ROUTE

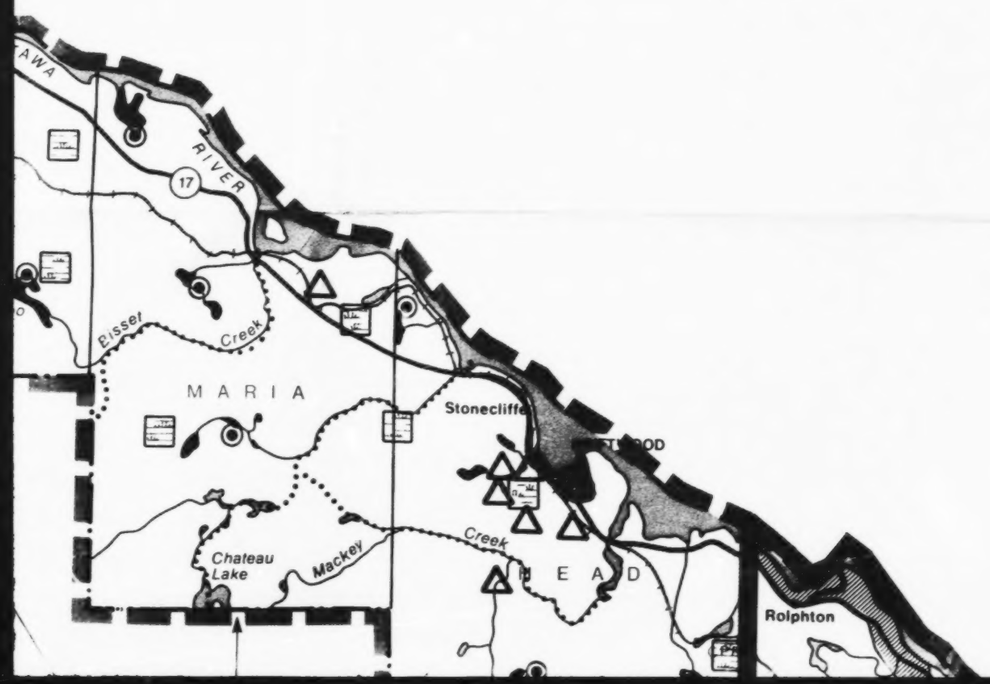
KE
T
L RESOURCE AREAS

10 15 20 Kilometres

5 10 15 Miles

N

- M.N.R. Administrative District
- Area included for District Planning
- Province
- County
- City, Town, Village, Township
- Community
- Indian Reserve
- Provincial Park
- Air Base
- Provincial Highways (17)
- Railways (CNR)



GENERAL RESOURCE AREAS

- A — MULTIPLE RESOURCE MANAGEMENT
- B — EXISTING PROVINCIAL PARK
- C — CANDIDATE PROVINCIAL PARK
- D — AREAS OF NATURAL & SCIENTIFIC INTEREST:
  - LIFE SCIENCE FEATURE
  - EARTH SCIENCE FEATURE
- E
  - MNR SNOWMOBILE TRAIL
  - MNR CROSS-COUNTRY SKI TRAIL
  - CANOE ROUTE

Waterloo Lake

Bissett Creek

MARIA

Stonecliffe

DRIFTWOOD

Chateau Lake

Mackey Creek

HEAD

Rolphton

Heart Lake

ROLPH

Chalk River

PROVINCE OF QUEBEC

Head, Clara & Maria Township is part of the
Ministry of Natural Resources' Algonquin Park District

ALGONQUIN PARK DISTRICT

Maskinonge Lake

Corry Lake

Cartier Lake

FOREST EXPERIMENTAL STATION

BUCHANAN

CFB PETAWAWA

Petawawa River

CNR

Barron River

McKAY

Black Bay

Petawawa

McKay

BONNECHERE RIVER

RENFREW COUNTY

Couchan Lakes

BONNECHERE

RICHARDS

BURNS

CNR

Creek

Indian

PEMBROKE

AREAS OF NATURAL & SCIENTIFIC INTEREST:

D
- LIFE SCIENCE FEATURE
- EARTH SCIENCE FEATURE

E
- MNR SNOWMOBILE TRAIL
- MNR CROSS-COUNTRY SKI TRAIL
- CANOE ROUTE
- MNR ACCESS POINT

F — WINTER DEER RANGE

G — WETLAND

H — NESTING SITE

I — COLD WATER SPORTS FISHERY

J — SPAWNING AREA

K — SEED ORCHARD/TIMBER RESEARCH PLOT

L — INTENSIVE FOREST MANAGEMENT AREA

M — FIRE RISK ZONE (Extreme, High & Moderate)

ad. Clara & Maria Township is part of the
istry of Natural Resources' Algonquin Park District.

MARIA

Stonecliffe

Bisset Creek

Chateau Lake

Mackey Creek

READ

Rolphton

Heart Lake

ROLPH

Chalk River

PROVINCE OF QUEBEC

ALGONQUIN PARK DISTRICT

WYLIE

Corry Lake

Cartier Lake

Maskinonge Lake

BUCHANAN

FOREST EXPERIMENTAL STATION and CFB PETAWAWA

Petawawa

CPR

Barron River

McKAY

PETAWAWA

Black Bay

McKay

CNR

Creek

Indian

BONNECHERE RIVER

RENFREW COUNTY

Couchan Lakes

BONNECHERE

BURNS

RICHARDS

PEMBROKE

62

17

AREAS OF NATURAL & SCIENTIFIC INTEREST:

D
- LIFE SCIENCE FEATURE
- EARTH SCIENCE FEATURE

E
- MNR SNOWMOBILE TRAIL
- MNR CROSS-COUNTRY SKI TRAIL
- CANOE ROUTE
- MNR ACCESS POINT

F WINTER DEER RANGE

G WETLAND

H NESTING SITE

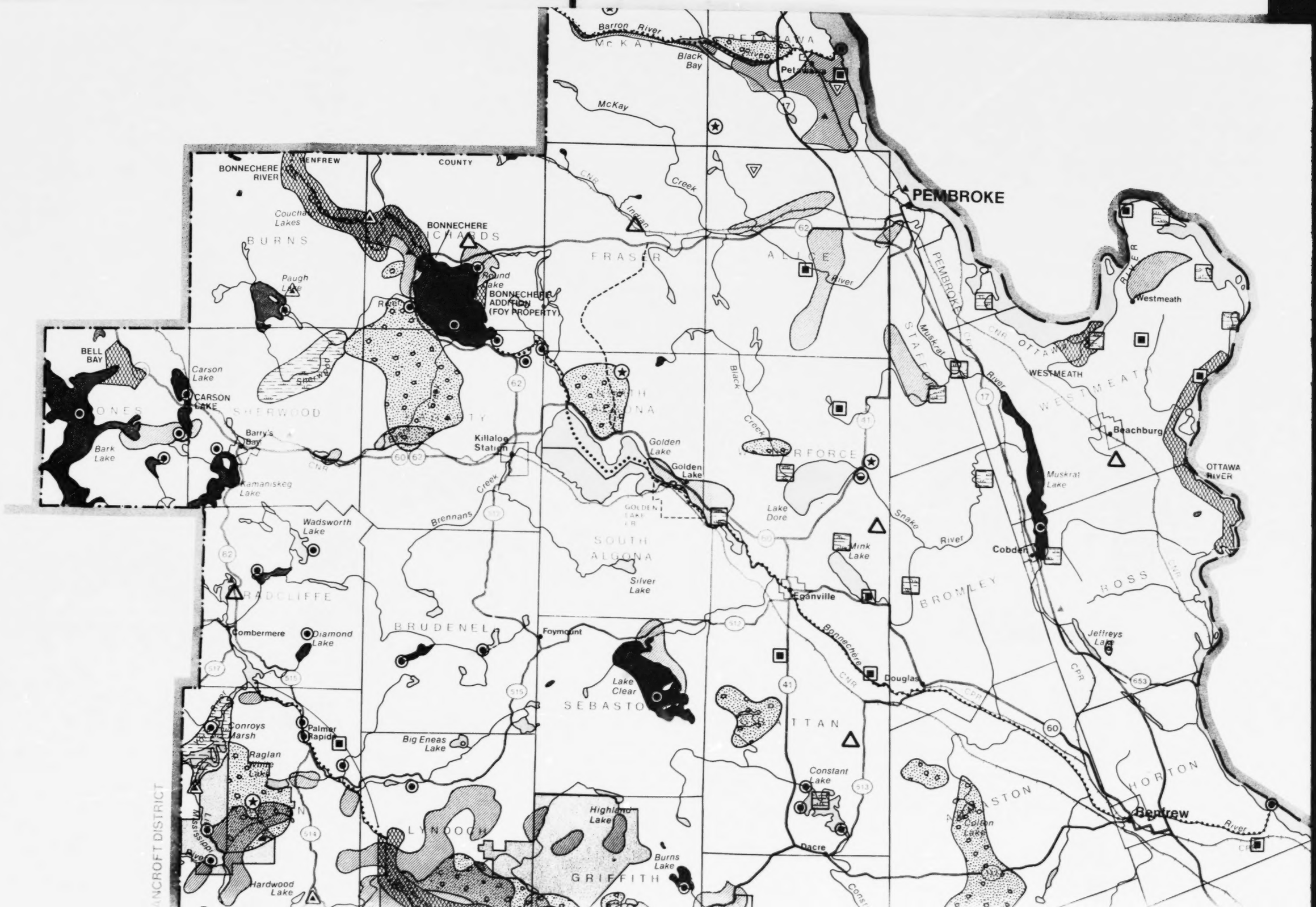
I COLD WATER SPORTS FISHERY

J SPAWNING AREA

K SEED ORCHARD/TIMBER RESEARCH PLOT

L INTENSIVE FOREST MANAGEMENT AREA

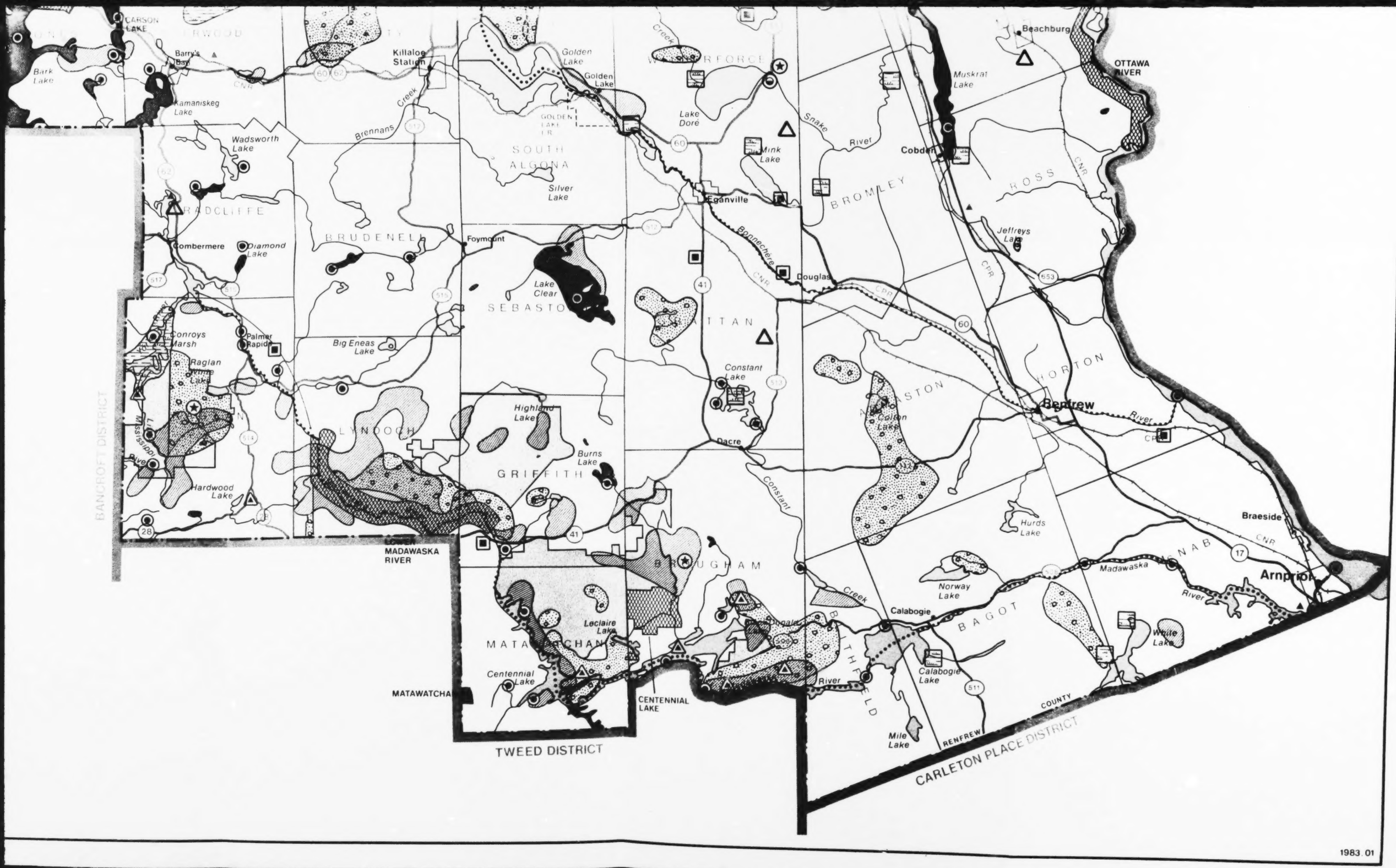
M FIRE RISK ZONE (Extreme, High & Moderate)


Barron River
McKAY
Black Bay
Petawawa
McKay
RENFREW COUNTY
BONNECHERE RIVER
Coucha Lakes
BONNECHERE
RICHARDS
BURNS
Paugh Lake
Round Lake
BONNECHERE ADDITION (FOY PROPERTY)
Indian Creek
CNR
FRASER
ALICE
River
PEMBROKE
PEMBROKE
Muskrat
STAFFORD
CNR
OTTAWA
RIVER
Westmeath
WESTMEATH
WESTMEATH
Beachburg
OTTAWA RIVER
Muskrat Lake
BELL BAY
Carson Lake
CARSON LAKE
Shetwood Creek
Black Creek
SHERWOOD
Barry's Bay
Bark Lake
Killaloe Station
Golden Lake
Golden Lake
Kamaniskeg Lake
Brennans Creek
GOLDEN LAKE ER
SOUTH ALGONA
Lake Dore
Mink Lake
Snake River
Cobden
Wadsworth Lake
Silver Lake
RADCLIFFE
BROMLEY
ROSS
Combermere
Diamond Lake
BRUDENELL
Foymount
Eganville
Bonnechere River
Jeffreys Lake
CNR
CPR
Douglas
Lake Clear
SEBASTOPOL
ATTAN
Conroys Marsh
Palmer Rapids
Big Eneas Lake
Raglan
Constant Lake
HORTON
Highland Lake
Mississippi River
LYNDOCH
Burns Lake
GRIFFITH
Dacre
Renfrew
River
Hardwood Lake
ANCROFT DISTRICT

RENFREW COUNTY
BONNECHERE RIVER
Barron River
McKAY
Black Bay
Petawawa
McKay
CNR
Creek
Indian
PEMBROKE
Couchan Lakes
BONNECHERE
BURNS
RICHARDS
FRASER
ALICE
Paugh Lake
Round Lake
BONNECHERE ADDITION (FOY PROPERTY)
River
Pembroke
Muskrat
STAFFORD
River
Westmeath
RIVER
CNR
OTTAWA
WESTMEATH
Carson Lake
CARSON LAKE
SHERWOOD
Sherwood
Barry's Bay
Killaloe Station
Golden Lake
Golden Lake
Black Creek
WILBERFORCE
Beachburg
Muskrat Lake
OTTAWA RIVER
CNR
Kamaniskeg Lake
Creek
Brennans
Wadsworth Lake
GOLDEN LAKE I.R.
SOUTH ALGONA
Lake Dore
Snake River
Mink Lake
Cobden
ROSS
BROMLEY
Silver Lake
Eganville
Jeffreys Lake
RADCLIFFE
Combermere
Diamond Lake
BRUDENELL
Foymount
Bonnechere
Douglas
CNR
CPR
Lake Clear
SEBASTOPOL
RATTAN
Conroys Marsh
Palmer Rapids
Big Eneas Lake
Raglan
White Lake
Constant Lake
HORTON
EASTON
Renfrew
River
CPR
Highland Lake
LYNDOCH
Mississippi River
Colton Lake
Dacre
Burns Lake
GRIFFITH
Hardwood Lake
Constant
Braeside
ANCROFT DISTRICT

CARSON LAKE
Barry's Bay
Bark Lake
Kamaniskeg Lake
Killaloe Station
Golden Lake
Golden Lake
Creek
Brennans Creek
Wadsworth Lake
Lake Doré
Snake River
Mink Lake
Beachburg
OTTAWA RIVER
Muskrat Lake
Cobden
Eganville
Silver Lake
SOUTH ALGONA
RADCLIFFE
BROMLEY
ROSS
Combermere
Diamond Lake
BRUDENELL
Foymount
Bonnechere
Douglas
Jeffreys Lake
Lake Clear
SEBASTOPOL
Conroys Marsh
Palmer Rapids
Big Eneas Lake
Raglan
Lake
Constant Lake
Highland Lake
Burns Lake
LYNDOCH
GRIFFITH
Dacre
Colton Lake
Renfrew
River
Hardwood Lake
Hurds Lake
Constant
LOWER MADAWASKA RIVER
BROUGHAM
Norway Lake
Madawaska
River
Calabogie
Leclaire Lake
MATAWATCHAN
BAGOT
White Lake
Centennial Lake
Calabogie Lake
MATAWATCHA
CENTENNIAL LAKE
River
Mile Lake
RENFREW
COUNTY
BLITHFIELD
BANCROFT DISTRICT
TWEED DISTRICT
CARLETON PLACE DISTRICT

Ministry of Natural Resources
Ontario


CARSON LAKE
Barry's Bay
Killaloe Station
Golden Lake
Golden Lake
Bark Lake
Kamaniskeg Lake
Creek
Brennans Creek
Wadsworth Lake
Lake Doré
Snake River
Mink Lake
Beachburg
OTTAWA RIVER
Muskrat Lake
Cobden
SOUTH ALGONA
Silver Lake
Eganville
BROMLEY
ROSS
Jeffreys Lake
RADCLIFFE
BRUDENELL
Combermere
Diamond Lake
Foymount
Bonnechere River
Douglas
Lake Clear
SEBASTOPOL
ATTAN
Conroys Marsh
Palmer Rapids
Big Eneas Lake
Raglan
White Lake
Constant Lake
Dacre
Colton Lake
WORTON
Renfrew
Highland Lake
LYNDOCH
Burns Lake
GRIFFITH
Hardwood Lake
Hurds Lake
Braeside
Madawaska River
Arnprior
Norway Lake
Calabogie
BAGOT
White Lake
Calabogie Lake
Leclaire Lake
MATAWATCHAN
Centennial Lake
MATAWATCHA
CENTENNIAL LAKE
BROUGHAM
Mile Lake
RENFREW COUNTY
MADAWASKA RIVER
BLITHFIELD
BANCROFT DISTRICT
TWEED DISTRICT
CARLETON PLACE DISTRICT
1983.01

POOR

QUALITY

ORIGINAL